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ABSTRACT

As the academic library plays the roles of intermediary and adjudicator of collection purchases and cancellations, faculty involvement in library resource decisions is not only commonplace, but essential to making such decisions. Faculty involvement in cancellation projects is often enhanced by a thorough explanation of the depth of financial problems facing libraries. This study used both faculty and librarian lenses to examine how members of higher education tend to view journal cancellation factors, both from the vantage point of library users (faculty) and collectors of information (librarians). Responses to questionnaires were received from 18 faculty members (13%) and 20 librarians (87%). The study finds that faculty and librarians indicate highly similar preferences for factors to use when canceling journals. Two of 10 suggested factors, in-library usage and authority, were named important considerations by both groups. The study highlights the perceived constraints preventing faculty participation in journal cancellation decisions. Librarians named time (42%) and information (36%) at the two main reasons that faculty would have nonparticipation or low participation with librarians on journal cancellation decisions. Five appendixes contain the cover letters and surveys used in the study. (Contains 22 tables and 137 references.) (SLD)

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Academic Library Administration: A Case Examination of Faculty-Librarian Perceptions of Journal Cancellations and the Decision-Making Process in a Large, Urban Institution

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Abstract

As the academic library plays the role of both intermediary and adjudicator of collection purchases and cancellations, faculty involvement in library resource decisions is not only commonplace, but essential to making these campus decisions (Atkinson, 1993). Faculty involvement in cancellation projects is often enhanced by a thorough explanation of the depth of the financial problems confronting libraries as a result of journal pricing (Barstow, 1993).

Previous studies on scholarly-communication issues start with the initial studies of journals by Fry and White (1976) and *Scholarly Communication: The Report of the National Enquiry* (1979), which creates the historical foundation for this examination of scholarly-communication issues. Fry and White (1976) researched library budgets and the shifting of fiscal resources from monograph purchases to maintain journal collection purchases. Both of these studies set the stage for an understanding of the continued scholarly-communication problems that academic institutions would face in the following decades.

With this study of the factors seen through both a faculty and librarian lens, this study descriptively examines how these members of

higher education tend to view these cancellation factors, both from the vantage point of library users (faculty) and collectors of information (librarians). Future collaborative decision-making opportunities between librarians and faculty will further determine whether other groups of librarians and faculty agree upon the use of these factors, and to what degree.

Among the findings of this study, faculty and librarians indicate highly similar preferences for factors to use when canceling journals; namely two of ten factors, in-library usage and authority, were named important considerations by both groups. Second, in examining librarian perceptions of barriers to faculty involvement in decision making, this study highlights the perceived constraints preventing faculty participation in journal cancellation decisions. Librarians named time (42%) and information (36%) as the two main reasons that faculty would have non- or low-participation with librarians on journal cancellation decisions.

Dedication

"What they're doing is not a trend." J. Timberlake

To Betty, Rachel and Julie,

you are the family I love and I thank you for it all.

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CHAPTER 1: INTRODUCTION

Scholarly communication in the U.S. has been closely examined in the past two decades by librarians because of the acceleration in costs of serial, scholarly communication. Specific disciplines of research have increased at unprecedented rates, namely the areas of scientific, technical, and medical (STM) publishing.

The problem of price increases of journal subscriptions has reached unprecedented heights. Price for journal subscriptions climbed an average of 147% from 1986 to 1996; specifically, the calculated average serial subscription for research library materials increased 9.5% a year for over a decade (Case, 1998). Granting that these statistics will continue to climb, cancellations of journals will only become more commonplace, yet unsuccessful in meeting the goal of containing costs.

The Association of Research Libraries in their *Serials Pricing Project* (1989) highlighted seven elements in publishing that may be partially responsible for journal price increases. These are publisher-market behavior (duplicate pricing structures of publishers that charge U.S. libraries more than libraries of other countries); exchange-rate

differentials; growth in published research; competition in the academy; publisher domination by market segment; journal-publishing economics (namely, fewer libraries or a narrower market); and finally, the mergers and acquisitions of smaller presses to create a handful of giant, commercial publishers. While each of these may be more dramatic in certain libraries, each is a relevant cause of the current problem.

The solution to the increasing expense consistently used throughout the two past decades has been to cancel journals. These cancellation decisions are usually made by using a list of factors upon which to evaluate the journal collection, which is then forwarded to the faculty for consultation on the decision (Budd, 1998). But, faculty involvement in journal cancellations is sometimes seen only as an opportunity to object to scheduled cancellations from the librarians, and, at some institutions, the university administrations have not wanted the library to discuss specific journal cancellations with the faculty (Stephens, 1993).

At the same time that journal costs were rising, the overall economy of higher education tightened (Hamaker, 1993; Paul, 1984). A university administration could no longer provide a library collection-

development budget that was increasing at the same rate as the annual renewals of library journals, and librarians had to look for other ways to provide information, namely through resource sharing, in order to cancel journal subscriptions (Kaser, 1995). By the 1990s, sizable journal-cancellation projects were occurring at a time when library collection-development budgets were in decline or there were no increases to the overall library budget (Cummings, Witte, Bowen, Lazarus, & Ekman, 1992; Hawkins, 1998; Tenopir & King, 2000). Therefore, what librarians came to grapple with was an environment in which the library budgets were held hostage by the spiraling financial needs of the journal collection, a problem known to librarians as the "serials crisis" (Okerson & Stubbs, 1991; White, 1988).

Costs of journals during the 1980s and 1990s continued to accelerate and created what could be identified as a science of journal cancellations. Identified characteristics of this new economy of journals were (1) the two-tiered, differential pricing structures, one structure for libraries and another price for individuals; (2) different library rates for specific, targeted countries; (3) the varying factors in the weakening of

the U.S. dollar; and (4) the substantial, yearly incremental increases of sci-tech journals (Astle & Hamaker, 1988).

As these inflationary increases became commonplace in scientific publishing, a more prominent issue was the growing role of foreign business entities and their impact on the scholarly-publishing marketplace (Okerson, 1986). As these foreign monopolies grew, so did the problem of differing library rates for specific, targeted countries. The nature of these systemic problems were exacerbated by (1) the reduction of cheaper, non-profit scholarly-society publication houses and (2) the emergence of monopolies in publishing by academic subject area, especially within the sciences (Mattlage, 1999). This collapsing of competition in the scientific-publishing marketplace is one of the current, essential problems facing libraries purchasing scientific, technical, and medical research today.

While faculty have been seen to be extremely loyal in suggesting specific journals for purchase and cancellation (Hamaker, 1993), their needs are still high, especially in the sciences. Competition to be published increases in the scientific literature, and new publications are developed from established journals as a way to meet new, growing areas

of research, a trend called "twigging" (Richards, 1991). However, the trend is not seen in the humanities, where competition increases, but few specialized journals develop (Bieber & Blackburn, 1993).

With these growing expectations for a large and diverse medical journal collection, faculty expect journals to be annually renewed and new journals titles in emerging fields to be added in anticipation of new, committed readers (Walker, 1998). Both of these expectations will inhibit the cancellation of journals (Stankus, 1985). A compounding problem is finding a strategy to make cancellations across subject areas equitably, yet unfairly as some areas of research are more heavily invested in journals (Williamson, 1985). Faculty involvement is crucial in this process, and it is within these dynamic and difficult constructs that journals collections must be built.

Statement of the Problem

As the academic library plays the role of both intermediary and adjudicator of collection purchases and cancellations, faculty involvement in library resource decisions is not only commonplace, but essential to making these campus decisions (Atkinson, 1993).

Faculty involvement in cancellation projects is often enhanced by a thorough explanation of the depth of the financial problems confronting libraries as a result of journal pricing (Barstow, 1993). Literature on scholarly-communication pricing starts with the initial studies of journals by Fry and White (1976) and *Scholarly Communication: The Report of the National Enquiry* (1979), which creates the historical foundation for any examination of scholarly-communication issues. Fry and White (1976) researched library budgets and the shifting of fiscal resources from monograph purchases to maintain journal collection purchases. The 1979 Report posed several research questions, including how scholarly information was dispersed through publishing channels during times of financial difficulty.

Both of these studies set the stage for an understanding of the continued scholarly-communication problems that academic institutions would face in the following decades. As these problems became more intensified, communicating the issues of purchasing journals and promoting campus and national involvement of faculty in the discussions have been championed as solutions in the field of academic library administration (Madison, 1999).

As a result of accelerated journal costs and the inability of library budgets to keep pace, libraries were forced, and are continuing, to cancel journals to deal with these problems. As the financial inability to purchase journals continues, librarians work with the knowledge that previous journal cancellations have been ineffective in completely controlling these price-escalation and related problems, yet it is crucial that faculty involvement in making these cancellation decisions continue.

Even as academic libraries have become an essential part of the modern university's complex social system, serving as the "nodes" in the scholarly communication process (Dain, 1990), library journal budgets have not retained their percentage of overall university expenditures, and the library collections across the academy are in continual risk of cancellation.

The situational problem has the essential elements of (1) constant increase in journal prices (Case 1998, 2001) and (2) exceptional growth of published information. The general expansion of research and research fragmentation (twigging) usually occurs in developing areas of thought, where new journals explore issues of new perspectives from existing journals (Nisonger, 1998).

Constant Increases in Prices

Price increases in journal subscriptions climbed an average of 147% from 1986 to 1996. As price increases became solidified on campus, during this same period book costs increased 63% and the Consumer Price Index increased by 41% (University of Virginia, 1999). Since 1986, the calculated average serial subscription for research library materials increased 9.5% each year (Case, 1998). For libraries purchasing STM journals, fields in which journals are the predominate form of information delivery, the data are considerably worse. Comparing what library budgets were able to purchase in 1986, library budgets would need an increase of 70% to purchase the same share of library materials in 1998 (Association of Research Libraries, Association of American Universities, & Pew Higher Education Roundtable, 1998).

By the late 1990s, libraries purchasing in science, technology and medical fields were spending 30 times more on journal collections than they did in 1970, yet the volume of journal information collected was demonstratively smaller because of cancellations (Cox, 1998). The difficult issue for the academy is that journals are an ongoing financial commitment, unlike one-time budget expenditures. When journal

expenditures continue and increase, the predictions of averages are difficult to budget. The Association of Research Libraries now predicts that by 2020 their average member library will pay $1,632 per journal per year (Kyrillidou, 2000). For the hard sciences, especially medicine, it can be demonstrated that these averages are measurably higher. The following tables are illustrative of the increases in prices of journals in these subject areas.

Table 1. Current Increases in Science, Technical, and Medicine (STM) Journals

Field of study	Price per title (2001)	% of change from 1997-2001
Biology	$1,064.33	34.53
Botany	$ 790.28	25.93
Chemistry	$1,918.09	34.29
General Science	$ 830.55	48.30
Health Sciences	$ 728.14	38.89
Technology	$1,013.34	42.18
Zoology	$ 866.03	39.21

Born, K. & Van Orsdel, L. (2001). Searching for serials utopia: Periodical price survey 2001. *Library Journal, 126*(7), 53-58.

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Table 2. High-Priced Journal Subscription Prices, FY2000

Journal title	2000 Price	Publisher
Brain Research	$16,344.00	Elsevier
Journal of Comparative Neurology	$14,995.00	Wiley
Nuclear Physics B	$12,113.00	Elsevier
Tetrahedron	$11,624.00	Elsevier
Journal of Applied Polymer Science	$11,570.00	Wiley
Chemical Physics Letters	$ 9,029.00	Elsevier
Journal of Polymer Science Part A: Polymer Chemistry	$ 8,535.00	Wiley
Journal of Polymer Science Part B: Polymer Physics	$ 8,535.00	Wiley
Physics Letters B	$ 7,595.00	Elsevier
European Journal of Pharmacology	$ 7,329.00	Elsevier
American Journal of Medical Genetics	$ 6,995.00	Wiley
Gene	$ 6,974.00	Elsevier

Create Change (2000). Retrieved July 20, 2001, from http://db.arl.org/journals

Growth of Published Research

The rates of both published articles and the number of overall faculty conducting research has substantially increased in the past quarter century (Bentley & Blackburn, 1990; Blackburn & Lawrence 1996). This ties directly to the problem of more scholars attempting to publish, which then results in expanded avenues for publication. In a

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setting in which academic units examine the number of publications produced by faculty to determine productivity for advancement, publishing venues have become more specialized and more numerous, and more taxing on the research collections in those libraries supporting high-producing departments (Gardner, 1991).

Most disciplines have seen an expansion in the size of given publications, demonstrated by higher page counts and additional issues (Bieber & Blackburn, 1993). This phenomenon has deepened since there is competition to publish in quality journals and other journals are concerned with developing a reputation in the field (Williamson, 1977; Ziman, 1980). Science has the additional onus of having a preference for journal publication because of the need for speed in scientific discovery and publishing (Richards, 1991). All of these expansive issues in publishing only make the problems of an expanding journal collection more difficult to control.

Purpose of the Study

This study is two-tiered. The purpose of the study is to (1) find factors that faculty and librarians will find agreeable and accept for

selecting journals for cancellation and (2) identify how faculty input into the decision-making process of canceling journals is used by librarians.

Conceptual Framework

Despite the measurable literature found on the issue of faculty involvement in canceling journals, there still exists a window of unexamined instances of cases in which effective faculty involvement in journal cancellation projects has occurred. It is not known whether members of the faculty even agree upon the factors that librarians use to cancel journals (Hawthorn, 1991; Sapp & Watson, 1989).

What is needed in the academy is a way to identify a shared vocabulary for making decisions on journal cancellations. Faculty governance has long been involved in library governance (Budd, 1998). One model of governance in higher education is consensus building on campuses, where the collegial decision-making model is used (Tierney, 1999).

Yet today, although multiple priorities exist on campuses, academic integrity and inquiry are still the focus of higher education. Even though libraries are a basic part of these cultural values, they also

have a managerial nature that may be in conflict with the autonomous culture of the faculty (Berberet & McMillin, 2002). Placed in the context of this study, the managerial focus of canceling journals may be in direct contradiction to the expansive, self-managed culture of the faculty role.

This study will examine whether faculty approach the factors used in journal cancellation differently from librarians using the same factors. Organizational decision making has several theorists; however, East's work (1997) has been chosen as the theoretical framework for this study of faculty and library decisions within an educational organization. East's topologies of decision making are built upon the theories of Odiorne (1969) and Drucker (1966). The "four primary constraints that impinge upon the organizational decision-making process in higher education" will be used exclusively in this study. These decision constraints are presented in table 3.

Table 3. Constraints on Decision Making

Decision constraints
• Time (Temporal proximity)
• Text (Information)
• Context (Environment)
• Constituents (Stakeholders)

East, W. B. C. (1997). Decision-making strategies in educational organizations. *The Journal of Physical Education, Recreation and Dance.*

While journal cancellation projects may seem like routine, process-ridden activities, decision makers are often affected by these constraints. Without such constraints, faculty might participate differently in decisions (East, 1997), such as in assisting with canceling journals. Despite these constraints, Hanson (1981) found successes when the library administration contributed to the process of canceling journals and library staff provided the leadership and vision to meet the financial objectives journal cancellations were intended to meet. Hanson continues, noting that faculty involvement is cited as a crucial element to accomplishing the goals of the library's cancellation project and, furthermore, it was faculty contact via departmental contact that was especially important.

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Since decisions such as these do affect the research capacity of the institution and the long-term research viability of the institution (Dow, Meringolo, & St. Clair, 1995), an investigation of the cancellation factors should be tied to the faculty on campus and the decision-making constraints they face (East, 1997). In journal cancellation projects, it is still unknown to what level the lack of faculty participation here is due to organizational constraints.

Research Questions

Research suggests that librarians make journal cancellations with the rationale that factors such as citation reports, language of publication, price, subscription availability, coverage by indexing and abstracting services, and use are valid and agreed upon decision-making variables (Bourne & Gregor, 1975; Broadus, 1985).

- From the perspective of faculty and librarians, are the factors used by librarians to cancel journals sufficient to inform librarians in the decision-making process for canceling journals?

- How is faculty input in the decision-making process gathered and used to inform librarians in their decision-making process for journals?

Significance of the Study

Finding agreeable factors for faculty to accept in deciding on journal cancellations would significantly add to what librarians in higher education know about the decision process and provide a common basis in evaluating the factors. This study aims to illustrate what various factors may indicate about the faculty's understanding of and agreement to the process of canceling journals.

If librarians, in the spirit of continuing a collegial culture in the academy, include faculty in the decision-making process for canceling journals but do not take the faculty's needs truly into consideration, a dissonance exists, or is created. Why are the faculty consulted for their input in such a case and why should they cooperate (Schwartz, 1998)? The current structure of continual cancellations does not illuminate what we know about the decision process of canceling journals.

Conducting this research study will provide an illustrative example of how faculty are included in library decisions. Faculty and librarians must gain a contextual understanding of the decision-making process, namely for collections assessments involving faculty. Fussler and Simon (1961) point out that previous library usage is an indication of future library usage. Such usage and evaluative information is essential to this study. By involving the faculty in the evaluation of the factors used to cancel journals, librarians can learn how faculty use the library and whether they agree with the librarians' cancellation criteria, which in turn, will provide further information on how to maintain a journal collection that best fits the needs of the faculty.

If librarians and faculty do have differing decision-making processes in place, and faculty are included in library decisions, what must be known about faculty influence on the final decisions? The significance of the findings of the study is the identification of how faculty view the usage of factors in a valuative instrument utilized in libraries for the cancellation of journals. Johnson (1983) offered that, as the journal collection problems grew more common on campuses, faculty were involved to provide justification for journals; however, the common

pattern followed by librarians was to use the evaluative justification as a faculty *opinion* and to allow librarians themselves to retain the right to make the final decision. Allowing faculty, as an external committee, to be involved in a fuller process of developing recommendations may be the best strategy for creating a valued journal collection (Tallman & Leach, 1989).

Need for the Study

Within this system of escalating costs and reduced access, researchers still demand the widest variety of scholarly journals. Colleges and universities have rich histories of the "publish or perish" mentality, where colleagues count the number of research results published as a measure of evaluation (Creswell, 1986). Such an environment only increases the demands on library journal collections, given a greater need for the journal collection to facilitate further faculty research (Harrington & Grice, 1992).

Among the substantial numbers of procedural examinations and case studies of journal cancellations (Metz, 1992; Stephens, 1993), it remains clear that librarians are looking for useful information to assist

in the process of selecting and canceling journals. While librarians have used these studies of cancellations to develop useful techniques to cancel journals in academic libraries, the evaluation of faculty interpretation of the factors used to cancel journals has not been fully exploited.

Librarians and faculty in the academy are stakeholders in the decision to cancel journals. Decisions have consequences, and a better understanding of the factors used to make decisions will only enhance library decision making. Therefore, this study is needed to (1) provide faculty with a further understanding of how librarians are attempting to work effectively with the dilemma of providing journals within tight, budgetary constraints and (2) further the use of a valuative factor, which may prove to be an effective procedural tool for librarians. As a descriptive study, which will further a previously used instrument, this research will further illuminate how cancellation factors are viewed by faculty. Fallon and Young (1983), Milne (1990), and Neame (1986) all concur to include faculty members in the decision-making process, especially in attempts to create a dialogue with faculty on these issues. Yet, the dialogue is ineffective if not based on the overall problems and

not matched with an effective assessment of whether the factors used to evaluate journal collections are agreed upon or, at least, useful.

The following study attempts to provide librarians with a working knowledge of how much similarity or dissonance exists between the faculty's and librarians' view of the factors used to procedurally decide which journals to cancel. As library users, faculty are essential to naming which journals are needed for their teaching, research, and service (Broadus, 1985).

In addition, this study will contribute to the growing interest and research in the process of making decisions about journals in institutions of higher education (Hamaker, 1993). The findings could inform members of both groups, faculty and academic librarians, as well as the greater higher education community, by providing insight into how decisions are made. The study could provide a successful, new framework and dialogue between faculty and librarians as the faculty are made more aware of the financial barriers to collection management issues in libraries (Barstow, 1993). Without such organizational knowledge, the long-term effects of these barriers may include inhibiting the growth and health of the academy and knowledge as a result of the

continued, rising costs of published research today (Case, 2001; Lawal, 2002).

Without this study, we lack the needed in-depth understanding of how groups of faculty view the ways journals are cancelled. Dole and Chang (1996) indicate the needed opportunity to examine these issues and to validate the long-term effects of including faculty in making these types of administrative decisions on campuses throughout higher education today. Kovacs (1990) concurs that it would be irresponsible for librarians to ignore the ability to connect information to decision-making procedures, especially for the purposes of collection development.

Summary

In summary, as journal budgets in academic libraries continue to diminish in relationship to the acceleration in journal costs, library administrators must more closely examine university expenditures for library collections. Journals, due to their growing portion of the library budget, are often under constant risk of cancellation or non-renewal.

To more fully understand the issue, this study is designed with the purposes of finding agreeable factors to accept for selecting journals for cancellation and to more fully understand how faculty input in the decision-making process is used by librarians to make these cancellation decisions. This study will demonstrate areas of similarity and difference between faculty and librarians, and attempt to uncover new ways of working together on these crucial issues.

Definitions

Throughout this study, some terminology is used that requires a contextual definition. These include:

CANCELLATION: Literature searches on terminology were conducted to weight the choice of terms used for this research study. Deselection is often used as a synonym for cancellation in the field of librarianship. However, the expanded, possible versions of cancel, cancellation, and canceling make this word the predominate word used to describe this process in libraries. Cancellation will be the term used throughout this study.

ISI CITATIONS: Another term used in this research is the ISI impact factor. This factor has been defined in the literature as "a measure of the frequency with which the 'average article' in a journal has been cited in a particular year" (SSCI Journal Citation Report, 1988). This is an essential term of art in the library field, since it is often used to demonstrate the usage or value-based-on-use figures librarians use in descriptive measures in research reports. Generally, *impact factor* is a term used to describe the ability of a new article citation to be used in future research by its inclusion as a citation in other works (Tsay, 1998).

JOURNALS: Serial, journal, and periodical are not used interchangeably here. The difference between the usage of serial and journal needs clarification. The broader term serial(s) is used more in the library literature, but the term has a broader meaning in library collections. Serials are, namely, "a publication in any medium issued in successive parts bearing numeric or chronological designations and intended to be continued indefinitely. Serials include periodicals; newspapers; annuals

(reports, yearbooks, etc.); the journals, memoirs, proceedings, transactions, etc., of societies; and numbered monographic series" (Gorman & Winkler, 1998).

Therefore, as a working terminology, "serials" has a much broader meaning, technically anything in the library collection that is positioned for the process of updating or continuation. Whereas journals are expected to fall into this broad category of serials, the terminology *journal* here is used to designate a journal as a scholarly journal, of which the term has a close association in higher education.

TWIGGING: A term found in publishing describing the term for journals that "break away" from established journals, specifically "those that focus on a subset of their parent journals" (http://www.cisp.org/imp/november_99/11_99turner-insight.htm)

USE STUDIES: Research conducted on which library materials are used in library collections, usually accomplished by studying circulation records or shelf-use tests. The canceling of journals is accomplished

after such studies determine what is unused or of low-use in a collection (Hubbard & Williams, 1989).

CHAPTER 2: LITERATURE REVIEW

Role of the Faculty

Of greatest interest to higher education may be the degree to which faculty are involved in the decision-making about journals. In examining why the faculty are not playing a substantial role, Atkinson (1995) found they are regularly consulted, but they are not responsible for building library collections, namely because of time and subject bias. In research into the academic environment of canceling journals, it appears that the lack of a functional deselection model is one of the many problems facing librarians and faculty (Broude, 1978). Where decisions were made by librarians based on models created to cancel journals, these decisions to cancel journals correlated poorly with the choices faculty would have made based on the same variables (Stenstrom & McBride, 1979). The varying degree to which faculty were involved in the decision-making processes make it necessary to understand (1) more about the cancellation process and (2) the faculty's view of cancellation factors, which is equally crucial and timely now.

There is a considerable range of faculty involvement in journal cancellation projects in academic libraries. One concern is to avoid contacting the faculty too often and ask only when truly needed (Durey, 1976). Another study acknowledges the political advantages to involving faculty in the process (Fry & White, 1979), including knowing more fully what research faculty are involved in and what curricula are being taught on campus. And, last, there is a need to find a balance of faculty involvement and not allow final decisions to be held under faculty control (Nisonger, 1998; Slote, 1982).

Research indicates that faculty-librarian collaboration could expand beyond selection and cancellation of library materials; however, so far the quantity of faculty-librarian contact has received little attention (Kotter, 1999). With improved relations between the two groups and librarians' and faculty's knowing each other's daily concerns, the relationship may become more productive and less contentious (Sapp & Watson, 1989). As cancellation projects continue, librarians could be viewed more as an advocate for faculty research materials rather than a detriment to faculty's access to journals.

In trying to keep the faculty involved in the process of maintaining an academic journal collection worthy of their research, librarians often solicit faculty to rate journals by lists or by factors, as well as to choose which journals are worthwhile for their specific research interests (Tucker, 1995). Faculty inclusion in decisions may be both advantageous to the library by providing librarians with a sense of the journal needs of faculty (Perkins, 1990), while at the same time giving the academy the benefit of cost containment for journals.

Since faculty are often asked their opinion in this process rather than given the opportunity to make the final decision for canceling journals, it is of interest to both librarians and faculty to determine the best way to include them in this process, rather than simply to assume that faculty involvement is always solicited (Grefsheim, Bader, & Meredith, 1983). Librarians are often working without enough faculty input to make informed decisions about what is needed in their libraries. Several studies note faculty's resistance to the way in which librarians decide what materials to cancel, namely applying low-use indicators and canceling what they assume are unused library materials (Hubbard & Williams, 1989). It is expected that with more strategy in the process,

faculty will become full partners in the decision-making process and assist librarians in these decisions.

Costs and Medical Journals

Cost, although commonly the deciding factor, should not be the exclusive factor in determining when to cancel a journal, especially without including other measures and factors (Bader & Thompson, 1989). Viewing journal cancellation as a dynamic mixture of factors for consideration might present a more realistic picture of the many elements faculty might consider when asked to offer input on what journals to cancel. However, in practice, research shows that the cost of specific journals is the reason that specific titles are commonly selected for cancellation (Chrzastowki & Schmidt, 1993, White, 1980; Yocum, 1989).

Librarians and researchers concur that in evaluating collections, among the factors that should be utilized are cost data matched with usage statistics and citation impact studies (Metz & Cosgriff, 2000). New financial models illuminate an essential problem associated with scientific, technology, and medical (STM) units' publishing. As

scientific, technology and medical (STM) journals accelerate in cost, faculty drop their personal subscriptions, preferring library-provided subscriptions (Tenopir & King, 1997). Therefore, as faculty lose access to their personal journal subscriptions, library journals become a crucial link to access. Then, as libraries cancel these publications because of the continual price increases, the list of total subscribers declines, and the remaining libraries subscribing to these expensive journals are forced to pay even higher prices.

Statistics of how publishing costs for journal subscriptions can quickly increase in response to canceling subscriptions in libraries and by individuals can be found in the following illustration. As the publishing companies attempt to remain profitable, these losses from cancellations are pushed on to the remaining subscribing libraries.

Table 4. A Hypothetical Example of Journal Price Increases

Circulation below 2,500	100 subscriptions cancelled	Price increases $6.00 per subscription
Circulation of 500	100 subscriptions cancelled	Price increases $186 per subscription

Tenopir, C., & King, D. W. (2000). *Towards electronic journals: Realities for scientists, librarians and publishers*. Washington, D.C.: Special Libraries Association.

Cancellation

Research on journal cancellation is conducted in four frameworks: (1) studies of journal-usage measures, (2) studies of cost indexes, (3) procedural studies and determining factors for canceling journals, and 4) studies of the long-term outcomes and consequences of canceling journals. In each type of study, librarians' efforts have focused on canceling journals and examined whether these efforts accomplished cost savings.

Studies of Journal-Usage Measures

Studies on journal use usually focus on the benefits or cautions of exclusively using journal-usage data as a measure for canceling. Representative of these cautions are Nisonger (2000), naming the

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Journal Citation Reports of the Institute for Scientific Information (ISI) as a "useful tool that can assist research librarians in the serials [journals] decision-making process . . . but, in conjunction with other traditional factors" (p. 273). Kovacs (1989) concurs, offering that multiple criteria should be considered when canceling journal titles, pointing out that journal rankings or impact factors are just one factor to consider when canceling journals.

Francq (1994) employs a usage-cost relational index measure, which allows for a formula to be applied on two measures rather than on exclusive factors. Research illuminates how librarians use multiple factors to cancel journals, but the problems in canceling journals continue without a matched understanding of how the faculty view these factors or cancellation methods (Broude, 1978).

A study of journals at Wichita State University (WSU) examined usage in relationship to the goal of reducing overall costs of journals in the library. With an eye on cost information and inviting faculty input, the library was able to ground its entire project in efforts to educate the faculty on (1) the intensity of the journal cost problems, (2) the economic factors on campus, and (3) the general trends in scholarly

communication. This study found that faculty see serious problems in the procedures utilized by librarians to develop cancellation lists and also found that their faculty expressed resentment toward the lack of library funding to support established academic programs (Hubbard & Williams, 1989). Librarians and researchers often find a gap between what is purchased and what is used in libraries (Schoch, 1994). For faculty, the results of shelf studies or nonuse studies alone are often not seen as valid factors for cancellation. Neame (1986) also points out that faculty often do not agree with the librarian's reliance on studying whether specific journal issues have been used by faculty and think that librarians should not cancel journals based on real or perceived non-usage of the journal collection by faculty.

Studies of Cost Indexes

Cost indexes and price studies are best summarized in the annual studies in *American Libraries* and *Library Journal*, where the annual U.S. periodical prices are reported. These indexes are subject breakdowns of costs of scholarly journals available and purchased in a given year. Other research examines price and publisher efforts, such as

identifying the rate of the price increases over the years (Marks, Nielsen, Petersen, & Wagner, 1991). Librarians call for the application of price studies, contrasting the unit costs of journals across disciplines and showing cost-per-use or cost effectiveness of journals (Astle, 1993). Such price studies, especially longitudinal studies, prove valuable when reviewing journals and making cancellation decisions.

Cost indexes in relationship to the proposed study are valuable since they document how specific journals have increased in price from year to year. Journal unit costs increased an overall 147% from 1986 to 1996, whereas books increased only 65% from 1986 to 1998 (Case, 1998; Tenopir & King, 2000). Libraries could not keep pace with these increases and throughout those years, they purchased approximately 6% fewer journals and 26% fewer books (Kohl, 2001; Tenopir & King, 2000).

Procedural Studies and Determining Factors Used to Cancel Journals

The most common type of cancellation study in the literature is the third type of study, the procedural case study. Representative examples of this research are found in Schoch and Abels (1994) and Segal (1986).

Schoch and Abels examined the process of journal cancellation by developing a valuative instrument. To counter criticism of methodologies used by librarians creating title lists for faculty to review, Schoch and Abels examined the viability of creating and implementing a valuative instrument for use in canceling journals on campus. Their instrument was developed to assist in providing faculty with useful information for making collection and cancellation decisions. Their instrument employs nine factors upon which to evaluate journals (1) costs, (2) citedness, (3) authority, (4) currency, (5) language, (6) physical characteristics (graphics and legibility), (7) indexing, (8) in-library use, and (9) availability (elsewhere) (p. 48). Their instrument takes into consideration the difficult problem of making further cancellations to already lean journal collections and attempts to work with faculty's need for information in how to assist in journal cancellation decisions.

The procedural cancellation research in the literature often describes how the problem of costs was dealt with in individual libraries (Clark, 1987), often including the need for faculty-librarian communication. Yet, within this type of research, it becomes clear that

academic libraries have a value in their unique and diverse collections, and by canceling these resources, the growth of knowledge in higher education is blocked (McCarthy, 1994). The cancellation literature often gives procedural steps, such as what departments to include and when to automate (Metz, 1992). Yet, the literature does not fully evaluate the role of the involved faculty (Farrell, 1981), but merely suggests librarians' need to initiate faculty contact on these issues.

Studies of the Long-Term Outcomes and Consequences of Canceling Journals

The fourth type of examination of these problems is the study of the long-term outcomes and consequences of canceling journals. By examining STM journal cancellations, it was found that libraries were moving towards the development of a two-tier system in which academic libraries would be able to offer substantial collections in the social sciences and humanities, while their basic and hard sciences would suffer a loss of securing intellectual capital in journals (Yocum, 1989).

In studying factors upon which to cancel journals, White (1980) found that over 80% of what is predominately canceled is unique to the canceling academic library. With White's research findings, matched

with the budgetary shifts and economic trends in libraries, it has become all too common to shift financial resources from book budgets to journal budgets to maintain journal collections (McCabe, 2001). Previously successful techniques, such as eliminating duplicate copies of the same journal title, have long since been exhausted (Chrzastowki & Schmidt, 1993).

Initial rounds of journal cancellations forced libraries to make cancellations that were mainly seen as inconvenience measures involving a lack of immediate access to journal articles (White, 1980), possibly due to the elimination of multiple subscriptions to specific journal titles. However, recent research on cancellations indicate that smaller academic libraries will be unable to meet the intellectual needs of their users because collections continue to shrink with each price increase (Lawal, 2002).

Scientists need current information, and journals are an essential part of their information-seeking behavior. Researchers have found a doubling of available scientific information in scholarly journals approximately every 15 to 17 years (Tenopir & King, 2000). To support research and teaching, faculty must have continual access to this growing

stream of published research. Specifically, science researchers rely heavily on journal collections (Branin & Case, 1998), especially for information that is considered cutting edge (Lawal, 2002).

Thus, the long-term effects of canceling may be the elimination of the uniqueness of each academic collection. Research on cancellation projects demonstrates substantial changes in the library collections of academic and research libraries for current and future users (Okerson & Stubbs, 1991). One study explored whether canceling activity across five academic libraries revealed decisions to cancel the same or similar journals (Chrzastowski & Schmidt, 1993). The findings in the initial study concluded that libraries in the study had retained high-use, essential titles. However, by their second study, Chrzastowski & Schmidt (1997) pointed out that libraries were canceling an exceptionally higher number of journal titles unique to each library. Faculty should be concerned with journal cancellations essentially because there is the possibility that some journals will be held by only a few libraries. Even some journals exclusively collected by a few libraries may now be targeted for cancellation (Bennion, 1994).

Academic libraries deciding to cancel journals in relative isolation may be canceling journals of value to other academic libraries and to their faculty. In examining librarians involved in canceling journals, researchers studied (1) the similarity of cancellation selections and (2) the typical cost of a serial title canceled. Relevant to this study, it was found that science and medicine are highly targeted areas for title cancellations (Chrzastowski & Schmidt, 1993). In their follow-up study (1997), it was found that science journals, namely those in the Library of Congress Class Sections of science, medicine, agriculture, and technology, are indeed "at-risk" journals. This study went on to report that over 71% of cancelled dollar amounts come from these collection areas.

Decision Making in Academic Library Settings

Decision Making as Applied to Journal Problems

What is examined here are not the models found in decision making, but the participation and how the information produced in such participation creates a dialogue and informative vocabulary for members of the decision-making groups. Paul (1984), in examining the scholarly-

communication problems, found faculty and librarians existed in competing states. Faculty exist in the *publish or perish* mode, while librarians were forced to evaluate access to individual journal titles rather than purchasing holdings of all journals available (Atkinson, 1993). In this new reality, faculty and librarians must work together on these issues; this will give faculty a better opportunity to become involved in the process of journal collection management issues.

Nutt (1990) compared different decision-making case situations, finding that managers have conflict, ambiguity, and uncertainty that they must deal with and find ways to respond to. He also found that after a stage of problem identification and option evaluation, decision makers can take the time to evaluate assumptions and search for missed opportunities. It seems that the problem of scholarly communication and journal cancellation fits in well here with Nutt's model, in that, the problem is clearly identified, the alternatives (cancellations) have been identified, but now it comes time to evaluate assumptions and search for missed (or new) opportunities. Perhaps librarians' more fully involving faculty in factor evaluation for journal cancellation is one such missed opportunity in higher education decision making.

Throughout organizational research, the same situation can be viewed by multiple decision models (Allison, 1971), yet Nutt (1990) argues that regardless of the model used in organizational units, a common way to describe the "how" of decision making will be a productive way to find solutions to an organization's problems. Chait (1979) would offer that the process would be enhanced by identifying one's clear objectives and defining goals, a process essential to identifying what the journal cancellation means to both faculty and librarians at this time of retrenchment. When the reasons that librarians find faculty input crucial to the success of the process are identified, faculty may more clearly see why and how librarians are using the obtained information (Lynch, 1990).

While decision sharing exists in libraries, we do not see where faculty are allowed to go beyond the formulated structure of higher education and become fully involved in the process of canceling journals. The chain of usage of the information between faculty's input into the decision and the librarian's use of the input may be at the crux of the disconnect (Kaplan, 1977). Generally, the larger the organization,

the more the decisions are allowed to filter through the organization in a decentralized way. Even though faculty are included in decision making, the weight of their input may not be strategically used (Blau, 1970).

Institutional Decision-Making Processes

What institutions do know about their decision-making styles informs us that looking at decisions only as singular, discrete decision events and not viewing decisions as part of a larger process, both socially and organizationally, is a flawed approach (Garvin & Roberto, 2001). In examining decision-making approaches, enhanced institutional effectiveness is argued by several theorists (Baldridge, 1971; Chaffee, 1983; Cohen & March, 1974). Yet, in areas where higher levels of performance are found, decisions are allowed by multiple groups in participative decision processes (Birnbaum, 1992). Lynch (1976), however, indicates disagreement, offering that library decision-making by groups should only be employed when it is seen as a way for the organization to be more effective than when following authoritarian models.

There are indications that faculty relations and institutional effectiveness are associated with such participation in decisions (Cameron, 1985). For the example of faculty involvement in journal cancellation, Walter (1990) specifies that where faculty are involved in the process of canceling journals, the process produces faculty support, which is seen as a further possibility for the cancellation project to be considered a success.

Decision-making studies have demonstrated that differences exist in decision-making models on academic campuses (Giesecke, 1993). However, few have attempted to understand the constraints that cause participation to be low in some decisions on academic campuses, for example, in the decision making needed for the canceling of journals.

East (1997) found that participation in decision making in academic units may be affected by outside influences. From these influences, East presents his barrier elements, used in this study to examine if faculty are not included in library decision-making opportunities for other reasons. Raffel (1974) notes that "there is no economic way to resolve differences among alternatives meeting different objectives held by different subgroups; where political conflict

exists, a political solution must be found" (p. 415). In working within two groups, such as faculty and librarians, if the problem is exclusively viewed as an economic or library finance problem, we fully ignore the greater organizational decision-making issue that library decision makers must address for this complex issue.

Literature Review Conclusion

What is left unaddressed in the literature is an investigation of how faculty as decision makers consider the process of canceling journals in academic libraries. By examining the factors used to cancel journals, we may find librarians better able to operationalize the input of faculty members for the cancellation of journals.

CHAPTER 3: METHODOLOGY

Chapter three explains the methods used during this study. Included are (1) an overview of methodology and the research questions, (2) populations, (3) instrumentation, (4) data collection procedures, (5) ethical and confidentiality considerations, (6) data analysis, and (7) research assumptions and limitations.

Overview of Methodology and Research Questions

The purpose of this study is to examine how faculty participate in decisions on the cancellation of academic journals and decisions librarians make with this faculty influence. The study attempts to identify the value and ranking of factors used to cancel journals. Second, the study assesses the level of involvement, participation, and decision-making barriers of faculty in library decision making in higher education.

The data collection used to inform these questions is classed as descriptive and employs techniques of survey research. Such research is non-experimental and uses a sample of respondents to gain information

without a manipulation of the subjects (McMillan & Schumacher, 1997). The research questions for the study are:

- **Research Question One**: From the perspective of faculty and librarians, are the factors used by librarians to cancel journals sufficient to inform librarians in the decision-making process for canceling journals?
- **Research Question Two:** How is faculty input in the decision-making process gathered and used to inform librarians in their decision-making process for journals?

Participants were also asked demographic questions.

Populations

Faculty Population

The sample chosen for this study consisted of faculty from eight departments within an urban institution (four departments in the health/medical sciences and four departments in the hard sciences). To determine the population to study, the researcher examined large, urban institutions with both health/medical science schools and schools of

natural, biological, and physical sciences. The research literature identifies science journals as those that are suffering greater losses in collections from the consequences of journal cancellations; therefore, science faculty were intentionally selected for this study. After locating an urban institution with four departments of equal and representative size, a university with both types of schools (medical and science), a sample of faculty was drawn for the study. Furthermore, the institution involved was chosen because neither library was in a state of retrenchment, which could have skewed the results of the study.

Librarian Population

Librarians were the second sample selected for this study, consisting primarily of those involved in canceling and acquisition issues in libraries, named in the library profession as "collection development librarians." These library practitioners usually work most directly with the faculty and in this study in the actual libraries used by the faculty of this study. After locating an urban institution with the aforementioned eight departments of faculty, a group of librarians was identified from which a sample for the study could be drawn. For all librarians involved,

the researcher worked with the respective library directors to ensure the appropriate members of the library staff were included in the study.

Instrumentation

The primary instrument, referred to throughout this study as the Schoch and Abels (1994) factors, was used in this study and administered in a setting similar to that used by Schoch and Abels, specifically science faculty and academic librarians at a large, urban institution.

The purpose of this instrument was to enlist faculty in the difficult task of assisting librarians in making the decision of what to cancel in an academic journal collection. In the early 1990s, the impetus for its design was a third round of journal cancellations in a four-year cycle at an urban institution where the faculty and library were both based in the sciences. The creators of the instrument, after a literature survey, developed lists of criteria upon which to cancel journals, and then gave it to faculty users to assess. After faculty feedback, this assessment produced the instrument employed in this research study.

As faculty were often asked to participate in the decision making for canceling journals, the instrument creators wanted to find a tool that would assist faculty in providing input for these decisions. Faculty became a primary source for creating these factors, and the instrument creators assumed they would keep these same faculty involved in future cancellation processes.

The specific question addressed by the instrument was whether factors could be identified that would demonstrate some level of value for a specific journal title within a given library collection. This evaluation of factors and the inclusion of faculty created a group of librarians and faculty members similar to the groups in this study. While the list was created by faculty self-selecting factors to be chosen for inclusion or exclusion in the previous study, the creators did test for validity and reliability with four faculty liaisons who were cognizant of journal cancellation issues.

The development of the instrument, namely in a science library in a university setting, makes the instrument parallel and applicable to both the population and research questions explored here. Here it was used as a way to illustrate how the examined faculty in this study view the

factors upon which journals are cancelled in the library they are using. The research question this instrument is applied to is research question one:

- From the perspective of faculty and librarians, are the factors used by librarians to cancel journals sufficient to inform librarians in the decision-making process for canceling journals?

For this study, it was adapted with permission to address possible factors that were not applicable during the time the instrument was developed (early 1990s), such as use of the Internet and electronic journals. The list of factors to rank, called *valuative factors* by the creators, was replicated in the Web-based survey. The factors are included here as table 5. Appendices C (Faculty) and D (Librarians) include the rank list of factors as it was used in this study.

Table 5. Valuative Factors from Schoch and Abels

Factors (named as a valuative instrument)
Costs (*i.e.*) cost per subscription (annual rate), cost per issue, cost per page, cost per article
Citedness (i.e.) impact factor (have others cited the journal?), total cites by other authors, cites by this department or institution in their publications
Authority (*i.e.*) publisher, editorial board membership, peer review, reputation in the field
Currency (*i.e.*), speed of publication
Language
Physical characteristics (*i.e.*), graphics (number and quality), legibility (typeset or camera ready), available electronically
Indexing, including in major index/abstract tools
In-library use (*i.e.*), critical campus resource required for teaching and research
Availability elsewhere (*i.e.*), other libraries on campus, at other local libraries, nationally through interlibrary loan
Other (please specify) (Include other factors, such as whether this material is available in other formats in other libraries you have access to; what is your reliance on this library as your primary library resource; importance or seminal nature of a given journal to your current research projects, etc.).

Schoch, N. & Abels, E. G. (1994). Using a valuative instrument for decision making in the cancellation of science journals in a university setting. *Proceedings of the American Society of Information Science (ASIS), 31*, 41-50.

The second instrument in this study was developed by the researcher and a panel of subject experts in the library field. The survey was then sent to two additional librarians to test the second survey for validity. The second instrument includes open-ended questions related to the library literature on cancellation issues and on the issues of communication and organizational decision-making.

The second survey, administered to the librarian group only is included as appendix D, and asks for a series of Likert-scaled questions on their self-assessment of involvement, participation, and barriers for faculty making these decisions. Three-open ended questions were asked to provide an opportunity for librarian participants to provide qualitative data on the decision-making process. The research question this instrument is applied to is research question two:

- **Research Question Two:** How is faculty input in the decision-making process gathered and used to inform librarians in their decision-making process for journals?

Data Collection Procedures

In the data collection portion of this study, the researcher collected data employing a six-step process designed to execute the research in this study. The first process was selecting the appropriate group for analysis. Faculty and librarians were chosen as the two groups for analysis. In this first step, all full-time faculty in eight select departments and all librarians involved in collection development activities were to be sent the survey information.

The second process was defining the methodology for analyzing the research questions. A mixed methodology of quantitative and qualitative methodologies was selected.

The third step was selecting the instruments applicable to the research questions. The instruments can be found in appendices C and D, with the ranking factors from Schoch and Abels (1994) displayed in table 5.

The fourth step in the process was to transform the instruments into a Web-based instrument, including the informed consent form to clarify for participants what involvement in the study entailed. The informed consent form is included as appendix B. Added to the Web-

based instrument were questions of demography, including department or library affiliation; number of years teaching or researching; time spent researching; degrees held; library job titles; and part-time or full-time status. The demographic questions were posed to examine whether participants in the sample would be representative of the populations examined.

The fifth step in the process was to collect, analyze, and summarize the data, using graphical explanations of the data when applicable.

The sixth and final step of the research design was drawing conclusions, making recommendations, and providing recommendations for future research.

Ethical and Confidentiality Considerations

As mandated by The George Washington University, Office of Human Research, an informed consent form was administered to the participants in the study prior to their participation. Therefore, in the cover letter sent to participants, a portable-document-format (PDF) document was provided explaining the parameters of the study. After

reading this document and agreeing to the consent form, participants were allowed to participate in the Web-based survey. (A copy of the cover letter given to participants as an Email is provided as appendix A. The informed consent form can be seen in this study as appendix B).

In addition to the ethical use of the data collected, the privacy of research records was addressed. The record of responses were kept private and were used for the purpose of research only. In terms of confidentiality, the Web-based designed survey enhanced the ability for the researcher to remain a confidential observer of the results and participants, since responses were only listed by number and not connected in any way to specific faculty or librarians in the study results.

To ensure confidentiality, as promised in the informed consent participants received, the respondents had no direct contact from the researcher. The surveys were posted on an anonymous university site and only the name of the researcher and survey name were listed on the site. To disseminate the survey, the researcher created a list of individuals who received the survey based on their department or library affiliation, but this list was not connected to the data or survey findings in any way. This ensured that no individuals were connected in any way

to specific survey findings. To ensure confidentiality, the findings are reported here in aggregate.

Data Analysis

Data analysis for this research study was conducted on the responses from the Web-based survey completed by participants. The collected responses, where applicable, were entered into the statistical software program, Statistical Package for the Social Sciences (SPSS) 10.0. The participant groups for the study are (1) faculty from 140 total possible participants with N=18 responding (13 percent); and (2) librarians from a total possible participants of 23 with N=20 (87 percent) responding. Because the response rate was low for all faculty groups (total, N=18), faculty respondents here are an aggregate of all the faculty responding.

In terms of technical issues related to the data analysis, one survey was received as unreadable because of a computer error while the participant was completing the survey. All other returned surveys were deemed complete and usable. There were some surveys that did not take full advantage of the opportunity for open-ended question/explanation,

but this was not determined as an incomplete survey and, therefore, not cause for exclusion. Of the remaining N=38 participants, N=18 (faculty) and N=20 (librarian), all data were retained and used.

Since the research seeks both open-ended, qualitative responses and quantitative data, the findings will reflect these differences. For the quantitative questions, percentage responses are presented. For the qualitative questions related to research question two, posed only to the librarians, the researcher developed a list of canceling and journal collection themes for analyzing and tabulating the data from the open-ended survey questions posed to librarian participants.

The content analysis of responses included creating lists of responses from librarians and identifying themes of similar responses that the researcher could group together for each question. All of the qualitative questions posed to librarians were collected and analyzed in the same manner (section IV in the *Librarian Survey*; appendix D). After analysis, these responses were grouped by question, coded, checked by an independent researcher/practitioner for validity of coding, and presented in the findings section of this study.

Research Assumptions and Limitations

Assumptions

For this study, the following assumptions were made:

1. All members of each of the departments studied with any rank of faculty, including such appointments as assistant, associate, visiting, or adjunct professor, are involved in some level of teaching, service, and research. Therefore, their individual needs for professional literature can be assumed to be similar, although they may vary by the volume of research materials needed.
2. Neither library included was currently undergoing an intensive cancellation project at the present time, so bias should not be due to this issue.
3. Faculty members involved in the study will accurately self-identify their status within their department and within the school.
4. While publishing channels may inevitably shift, traditional academic journals still have a firm standing in academic libraries.

5. Research will not be available universally in online formats for a considerable amount of time, and, therefore, journal cancellations will most likely continue to be made by academic librarians. Insights on the process are intrinsically valuable.

Limitations

For this study, the following limitations are acknowledged. Certain limitations may affect the ability to generalize to other populations.

1. The study will be conducted at one urban university, containing both medical sciences and hard sciences.
2. Faculty from eight departments were selected from both the hard sciences and health/medical sciences; librarians were selected from both campus libraries, one health/medical science library and one general library with a hard science collection.

3. The low response rate from faculty (N=18 responding, 13 percent) should be taken into consideration when comparing the faculty and librarian participant results.
4. Participants in this study needed some level of technological ability to participate. These included the ability to: use email, to open an HTML web link and to open a PDF file attachment. Response rates could have been affected by how the survey was created, disseminated and completed.
5. Adjunct faculty members may not be under the same requirements to perform research, which possibly could reduce their needs for journals.
6. Data collection is limited to members of the university from one semester only.
7. Since this study is being conducted at one institution, the findings can not be generalized.
8. Content analysis of the qualitative results was designed by the researcher.

Summary

The purpose of this study is to examine the factors that faculty may or may not find agreeable from which to cancel journals. The study also aims to identify how faculty input into the decision-making process of canceling journals is used by librarians. The methodology was chosen to gain data on these specific purposes. The findings of the study are reported in Chapter 4.

CHAPTER 4: RESEARCH FINDINGS

The findings presented in chapter four are reported from data collected from the two surveys described in the previous chapter. The two-tiered purpose of this study is to (1) find factors agreeable to faculty and librarians for selecting journals for cancellation and (2) identify how faculty input in the decision-making process is used by librarians. This chapter will show both descriptive and qualitative data, presented primarily in table form.

Three sections present the findings in this chapter. The first section includes the results from the faculty survey. The second section reports the results of the librarians surveyed. A third section summarizes the information and provides a basis for the discussion, conclusions, and recommendations drawn in chapter 5.

Faculty Participant Demographic Findings

The sample chosen for this study consisted of faculty from eight departments within an urban institution. Faculty participants were asked a series of demographic questions, including:

- Department
- Number of Years Teaching
- Number of Years Researching
- Estimated Research Hours per Week
- Highest Degree Earned

Table 6 and 7 provide these demographic findings.

Table 6. Faculty Department Affiliation

Department	Percentages
Anatomy	N=3 16%
Biochemistry	N=2 11%
Biological Sciences	N=1 6%
Chemistry	N=1 6%
Mathematics	N=5 28%
Microbiology	N=0 0%
Pharmacology	N=6 33%
Physics	N=0 0%

Faculty Sample Size, N=18.

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Table 7. Faculty Percentages of Categorical Variables

Number of years teaching	
1-4	N=2 11%
5-8	N=3 17%
9+	N=13 72%
Number of years researching	
1-4	N=0 0%
5-8	N=1 6%
5+	N=17 94%
Estimated weekly research hours	
1-5	N=2 11%
6-10	N=4 22%
11+	N=12 67%
Highest degree earned	
Doctorate	N=18 100%
M.D.	N=0 0%
M.D. & Doctorate	N=0 0%

Faculty Sample Size, N=18.

Research Question One: The Faculty Responses

Faculty Survey Question I.

Faculty were asked in the first question of their survey to:

- Rank these factors from 1 (LEAST IMPORTANT) to 9 (MOST IMPORTANT), or to 10 (where appropriate) when considering making a recommendation regarding the cancellation of journals.

Table 8. Ranking of the Factors by Faculty

Factors	Percentage Value
In-library use	83%
Citedness	82%
Authority	82%
Other	80%
Language	76%
Indexing	72%
Currency	66%
Physical characteristics	66%
Availability elsewhere	56%
Costs	44%

Percentages represent the ranking of factors showing a preference for the factor by a ranking of 5 or higher. (N=18).

This table shows the responses by percentage for the faculty group. Examining the cumulative percentages given a mid-range or higher (5 and higher) rank, it is reported that for faculty the three highest percentage rankings for factors are: In-Library Usage (83%), Citedness (82%), and Authority (82%).

Faculty participants were offered the option to provide comments on the factor noted as *other* in the survey. No respondents clarified what their individual response of *other* may have meant. Examples provided in the survey are listed below. Since there were no explanations offered

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by participants, it can not be determined which reason participants using *other* attempted to indicate by this response.

- Other (please specify) (Include other factors, such as whether this material is available in other formats in other libraries you have access to; what is your reliance on this library as your primary library resource; importance or seminal nature of a given journal to your current research projects, etc.).

Faculty Survey Question II.

The second survey question asked faculty the following question.

- What do you think are the three most important factors your library should consider in canceling journals?

For the faculty, these factors are found in table 9.

Table 9. Factors for Faculty

Factor Groups	Percentage
	N=18, 54 possible responses, 53 provided responses
• Reputation of journal • Authority in the field • Publish in the journal	**47%** 25 responses fit into this grouping of responses related to authority of the journal to the field. The comments were related to factors to evaluate, such as the reputation of the journal, the known career of the author/colleagues published, editorial board or columnist commitments, and whether on-campus colleagues were related to the journal in any capacity.
• Access issues • Inter-library loan availability • Consortium access • Personal copies of journal • Electronic database access	**33%** 18 responses named access to the journal articles elsewhere as being a factor to evaluate, including access in another library on campus or in town, in other's offices on campus, or at home.
• Relevant to current role	**20%** 11 responses from faculty named relevancy to their current role either as an educator or researcher on campus, courses taught, whether they were advising students to read the journal, etc.

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Librarian Participant Background and Descriptive Findings

The second group of participants in this study were librarians from two academic libraries within an urban institution. Librarian participants were asked a series of demographic questions in the faculty survey. For librarians, these questions were:

- Highest Degree Earned
- Library
- Do you work for the university full-time or part-time?
- What is your current job title?

Table 10 demonstrates the responses to the first three demographic questions posed to librarian participants.

Table 10. Librarian Percentages of Categorical Variables

Variables	Percentages	
Highest degree earned		
BA/BS	N=0	
MA/MLS	N=16	80%
Doctorate	N=4	20%
Library		
General, including science	N=10	50%
Medical	N=10	50%
Status		
Part-time	N=1	5%
Full-time	N=19	95%

Additionally important for the librarian participants are their experience or relevance in this topic, since the librarians do not fit into easily ranked areas such as, faculty, teaching faculty, research faculty, etc. Therefore, the participants were asked for their broad, job titles.

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Table 11. Librarian Job Titles

Job titles
Associate University Librarian for Collections Services (N=1)
Collection Development Librarian (N=7)
Coordinator, Information and Instructional Services (N=1)
Director (N=2)
Electronic Resources Librarian (N=1)
Instructional Technology Librarian (N=1)
Librarian (N=1)
Reference and Collection Development Librarian (N=1)
Reference Librarian (N=4)
Systems Librarian (N=1)

Librarian Sample Size, N=20.

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Research Question One: The Librarian Responses

Librarian Survey Question I.

Librarians were asked first to:

- Rank these factors from 1 (LEAST IMPORTANT) to 9 (MOST IMPORTANT), or to 10 (where appropriate) when considering making a recommendation regarding the cancellation of journals.

For librarians, the rank factors are found in table 12.

Table 12. Ranking of the Factors by Librarians

Factors	Percentage Value
Authority	100%
In-Library use	100%
Costs	95%
Indexing	85%
Citedness	85%
Language	70%
Availability elsewhere	65%
Currency	55%
Physical characteristics	30%
Other	35%

Percentages represent the ranking of factors showing a preference for the factor by a ranking of 5 or higher. (N=20).

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This table shows the responses by percentage for the librarian group. Examining the cumulative percentages given a mid-range or higher (5 and higher) rank, it is found for librarians the three highest percentage rankings for factors are: Authority (100%), In-Library Usage (100%), and Costs (95%).

As with faculty, librarian participants were also offered the option to provide comments on the factor noted as *other* in the survey. No respondents clarified what their individual response of *other* may have meant. Examples provided in the survey are listed below. Since there were no explanations offered by participants, it cannot be determined which reason participants using *other* attempted to indicate by this response.

- Other (please specify) (Include other factors, such as whether this material is available in other formats in other libraries you have access to; what is your reliance on this library as your primary library resource; importance or seminal nature of a given journal to your current research projects, etc.).

Librarian Survey Question II.

In the next question, librarians were asked the following question.

- What do you think are the three most important factors your library should consider in canceling journals?

For librarians, the results for this question are found in table 13.

Table 13. Factors for Librarians

Factor Groups	Percentage
	N=20, 60 possible responses, 50 provided responses
• In-library usage	**30%** 15 responses from librarians focused on library usage, such as amount of use, lack of use, and cost-relative use. Several commented that unused journals should be more closely examined as to why they are still purchased.
• Reputation of journal • Authority in the field • Overall importance of journal title	**26%** 13 responses fit into this grouping of responses related to authority of the journal to the field. Librarians reported the evaluation should be made on such factors as reputation of the journal, authority of the publisher and authors, importance of the articles and authors.
• Cost • Cost per usage ratio	**16%** 8 responses from librarians named cost a factor to closely evaluate. Amount of use in relationship to cost was reported as a representative evaluation factor for librarians.

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Factor Groups	Percentage
• Access issues • Inter-library loan availability • Consortium access	**14%** 7 responses named access to the journal articles elsewhere as a factor to consider when canceling, such as using interlibrary loan relationships, consortium access as an option after canceling a journal title.
• Citation ranking • Indexing	**14%** 7 responses from librarians named auxiliary factors often cited in the library literature worthy of examination. These factors included where the journal was indexed, how often the articles were cited by others; each indicating possible importance to the field.

Librarian Survey Question III.

In the last question in this section, librarians were asked the following question.

- What do you think *your faculty* consider as the three most important factors your library should consider in canceling journals?

For librarians, the results for this question are found in table 14.

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Table 14. Assumed Factors of Faculty by Librarians

Factor Groups	Percentage
	N=20, 60 possible responses, 50 provided responses
• Reputation of journal • Authority in the field • Publish in the journal	**50%** 25 responses fit into this grouping of responses related to authority of the journal to the field. The comments related to factors to evaluate, such as the reputation of the journal, the respect of the authors published, and whether the editorial board members of the journal were known or on campus.
• Access issues • Interlibrary loan availability • Consortium access • Personal copies of journal • Electronic database access	**34%** 17 responses named access to the journal articles elsewhere as being a factor that faculty members would see as a relevant reason to cancel a journal.
• Relevant to current role	**16%** 8 responses from librarians named relevancy to the faculty member's current role either as an educator or researcher on campus, courses taught, whether they were advising students to read the journal, etc.

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Research Question Two: The Librarian Responses

Librarian Survey Section IV, Question One.

In the first question in this section, librarians were asked the following question.

- How would you rate your involvement in selection and cancellation of journal titles?

The results for this question are found in table 15.

Table 15. Self-Evaluation of Librarian Involvement in Selection and Cancellation of Journals

	Primary responsibility	Fully involved	Somewhat involved	Rarely involved	Not involved
Selection	35%	35%	10%	15%	5%
Cancellation	32%	37%	0%	21%	10%

Librarian Sample Size, N=20.

Of the librarian participants, 70% of respondents in the librarian survey were individuals truly involved in these issues, seen either as their primary responsibility or that they are involved in journal concerns (table 15). On the question of journal cancellations, the librarian participants self-evaluated their involvement at 69% in two categories, with a breakdown of 32% percent reporting that issues of journal

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cancellations were their primary responsibility and 37% naming themselves fully involved in journal cancellation. Librarians with positions in management and technology, such as directors or the systems librarian, may fall into categories such as not involved reported here, yet their inclusion is of assistance in the study, because they may have more direct access with faculty in other venues.

Librarian Survey Section IV, Question Two.

- How often do you discuss journal selection and cancellation concerns with faculty members?

The results for this question are found in table 16.

Table 16. Self-Evaluation of Discussions of Journal Selection and Cancellation with Faculty

	1 or 2 times a week	Several times a month	Once a month	Several times a year	Once a year	Only for projects	Never
Selection			5%	63%		16%	16%
Cancellation				32%	16%	37%	16%

Librarian Sample Size, N=20.

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Discussions with faculty on the topic of journal selection or cancellation report that conversations with faculty regarding new journal selections were ongoing or frequent discussions for librarians [several times a year (69%)], whereas journal cancellation discussions were seen as more procedural, such as in an annual cancellation project or after a budget shortfall in the library. As in the question asking about personal involvement in selection and cancellation of journals, librarians with positions in management and technology, such as directors or the systems librarian, may fall into categories such as not involved reported here, yet their inclusion is relevant here, because they may have close ties with faculty in other venues on campus.

Librarian Survey Section IV, Question Three.

- In your library, how do you incorporate the use of faculty comments and/or decisions when considering journal cancellations?

Table 17. Librarian Incorporation of Faculty Discussion Comments for Journal Cancellations

Representative comments
• I incorporate their recommendations very carefully. I will only cancel a journal title if a faculty member if agrees with the cancellation.
• I would pass along any comments I receive from faculty to those librarians involved in decision-making
• While [I'm] not involved in cancellations, I do believe the faculty comments and usage statistics are carefully looked at when considering journal cancellations.
• Faculty comments play an important part of the cancellations of journals, but cost and usage play greater roles.
• I generally try to abide by the faculty wishes, budget permitting.
• [I] work to achieve faculty buy-in. Sometimes [I] move money from book budgets to serials.
• Their views are highly considered, but I try to balance them with the needs of the students. I have the final say on which journals are purchased and which are cancelled.
• I give [the faculty] dollar amounts on how much needs to be cancelled and they give me suggestions for cancellation.
• Precancellation lists are routed to faculty for comment.
• We generally solicit comments, ask for connections in what they are teaching; and then prioritize them in categories.

Librarian Sample Size, N=20.

Librarian Survey Section IV, Question Four, Part One.

- How satisfied are you with the level of participation of the faculty in assisting in establishing the journal collection in your library?

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Table 18. Satisfaction with Participation Levels of Faculty Involvement in Selection and Cancellation of Journals

	Very satisfied	Somewhat satisfied	Somewhat dissatisfied	Very dissatisfied	No opinion	Do not know
Selection	20%	20%	25%		10%	25%
Cancellation	16%	26%	21%	5%	11%	21%

Librarian Sample Size, N=20.

As for satisfaction with faculty participation on these issues, librarians are divided in their satisfaction with levels of faculty participation. The category *somewhat satisfied* (26%) shows the highest representation for librarians by percentage. The *dissatisfied* categories (26%) are the same percentage of librarians participants. With these results, librarians seem more positive with how the process of selecting and purchasing new materials for the library with faculty proceeds than with the level of participation faculty are willing to dedicate to canceling journals.

Librarian Survey Section IV, Question Four, Part Two.

Librarians were offered the opportunity to offer comments on their responses in table 18. Selected, representative comments are included below in table 19.

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Table 19. Librarian Comments on Faculty Involvement in Journal Cancellations

Representative comments
• Participation varies by department. Some [faculty] are very involved and others barely give you the time of day, no matter how much you try and get them involved. Library contacts for the faculty departments are the low man on the totem in departments and usually the newest professors get the job. These faculty are busily trying to get tenure and do not have the time to devote to library journal cancellations.
• We have a vocal faculty.
• Generally, the faculty are OK to work with on journal cancellations, but one department fights my efforts.
• Publication costs are aggravating the cancellation process, making the decision process almost an annual event. We sometimes wonder if faculty recognize the rising costs [of journals] and [the] insufficient raises to the library budget to keep tempo with publication.
• Faculty often don't accept the realities of library funding, so they want to keep journals even when we show them the budget can't sustain all the titles. In science and engineering, nearly all faculty put their own needs for titles in narrow research fields above the needs of undergrads and master's students. If the decision is either a general science title over a research title, they always want the more expensive science title to be retained.
• While some faculty are interested in the "serials crisis," most faculty decline our attempts to give them the broader picture of what we are considering.

Librarian Sample Size, N=20.

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Librarian Survey Section IV, Question Five.

In this question, librarians were asked the following question.

- Do you see any of the following as barriers for more participation from the faculty for journal cancellation projects in your library?

The results for this question are found in table 20.

Table 20. Librarian Perceptions of Barriers to Faculty Involvement in Decision Making

Decision-making barriers	Librarian Perceptions of Faculty's Barriers
Time (Temporal proximity), *i.e., Do you believe faculty consider themselves too busy to be involved?*	N=15 42%
Text (Information), *i.e., Do you believe faculty do not have information on the depth of journal costs?*	N=13 36%
Constituents (Stakeholders), *i.e., Do you believe faculty consider others on campus should be lobbying for a larger library budget to alleviate financial problems associated with journal costs?*	N=5 14%
Context (Environment), *i.e., Do you believe faculty consider they should not be involved in library decisions?*	N=3 8%

East, W. B. C. (1997). Decision-making strategies in educational organizations. *The Journal of Physical Education, Recreation and Dance*.

Librarian Sample Size, N=20, total response possible=80, since participants were allowed to "*check all that applied.*" Of the 80 possible, 36 responses are demonstrated above in percentages and response size.

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The findings from this question highlight that librarians perceive that the constraints of non-participation from faculty for involvement in journal cancellation decisions are either because of time (42%) or information (36%). Both of these issues were assumed by librarians as the reasons faculty may hold low-participation with them on journal cancellation decisions. This finding correlates well with the level of dissatisfaction librarians generally feel regarding the amount of time faculty will dedicate to assisting in canceling journals (tables 18, 19 and 20).

Librarian Survey Section IV, Question Six.

In this question, librarians were asked the following question.

- In your library, how familiar would you say faculty are with the trends in scholarly communication pricing, better know as "the serials crisis," throughout higher education and publishing?

The results for this question are found in table 21.

Table 21. Faculty Familiarity with Trends in Scholarly Communication Pricing

Level of familiarity	Percentages
Very familiar	N=0 0%
Somewhat familiar	N=8 42%
Somewhat unfamiliar	N=7 37%
Very unfamiliar	N=4 21%

Librarian Sample Size, N=20, Size (Responding), N=19

As with faculty participation, librarians see in the faculty a lack of familiarity and knowledge about the actual pricing of journals. Librarians indicate that the faculty are either *somewhat unfamiliar* or *very unfamiliar* (58%) with how journals are actually priced. If this representation is true throughout other faculty groups, librarians must take time to increase participation in journal cancellations and selection, including discussions of journal prices. If faculty are not cognizant of the problems librarians face in this area, it is questionable whether they will choose to work for a solution.

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Librarian Survey Section IV, Question Seven.

In this question, librarians were asked the following question.

- Are there other ways you would involve faculty in your library decision making for cancellations if you could easily obtain participation?

The findings for this question are found in table 22.

Table 22. Other Ways Librarians Would Involve Faculty in Decision Making for Journal Cancellations

Representative comments
• For me, the most helpful thing would be if the deans, university administrators, and possibly the department chairs would allow more focus in disciplines covered and taught at the university. A faculty member can evaluate what journals are important to him/her, but usually we are looking for a range of journals across a whole discipline. It gets tricky to decide to cancel a journal in a specialty field, because each faculty member has their own interest.
• I'd like an organized annual review of the titles supporting their department/program to determine if some titles should be cancelled and others added.
• Perhaps sending a list of the journals we are considering canceling to interested faculty and soliciting their comments.
• It's very important to show faculty the entire list of the library subscriptions for their department. This makes it easier for them to consider cancellations. Faculty sometimes have no idea of the expense, especially individual subscriptions are generally far lower than institutional prices.

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Representative comments
• Perhaps a committee or small group of professors in specific areas who met only 1 or 2 times a year to discuss various journal factors, specific and general. [Faculty should be] better aware of electronic alternatives.
• It would be very useful to use the faculty's network of contacts to identify key publications to add to the continuing value of existing publications.
• We have been trying to educate faculty on the serials crisis, but it doesn't seem to make much of an impact here. Any effort to change the model needs to come from the faculty, as they control the tenure process.
• [We could] hold a special meeting; invite the librarians to present suggested cancellations; group discussions may help professors hear other's needs.
• We work actively to educate faculty about journal pricing and e-publishing issues. I don't believe that they have a very clear understand of the issues involved and think we make decisions arbitrarily.

Librarian Sample Size, N=20.

Summary of the Findings

With the dual purpose of examining how faculty and librarians view the factors used in journal cancellations, the results of these groups indicate factor preferences that are highly similar between faculty and librarian groups. The analysis of the similarity shows faculty and librarians selecting two of the ten factors, namely in-library usage and authority, within close ranking as the most important factors to use in cancellation decisions.

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In the examination of librarian inclusion of faculty's involvement in decisions related to journal cancellation, librarians act with strategy and actually use faculty input in their decision making rather than acting arbitrarily. There is much opportunity for further examination of the inclusion of faculty in the area of library decision making. Since the primary purpose of this research was to study the factors used to cancel journals, if it is found that journal cancellations are inevitable and faculty are in agreement on the factors by which to cancel, this study would indicate that faculty should be further considered and included in future cancellation programs. This is especially true given the similarity in the ranking of the factors.

The strength of the study is the inclusion of the qualitative open-ended questions answered by librarians regarding the process of journal cancellations. The study findings demonstrate how faculty and librarians both view the factors of similar importance and how this information is incorporated into cancellation decisions.

Beyond the value of the ranking of factors and the self-assessment of the process for librarians, the included qualitative data results presented here on faculty involvement may indicate examples of how to

more fully include faculty in future cancellation projects in today's academic libraries, such as (1) by asking faculty for suggestions for cancellation and (2) identifying which factors faculty believe are important elements by which to evaluate journal titles.

CHAPTER 5: SUMMARY OF FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

The purpose of this chapter is to provide a summary of the findings of the study, suggest conclusions that can be drawn based on the study, and present recommendations for practitioners and future researchers.

Summary

This study attempts to provide a bridge between previous research studies that had only looked at librarian or faculty groups individually, without comparing each group's assessment of the factors used to cancel journals and their insights into the process. The study describes how faculty and librarians view the factors used to make journal cancellation decisions and how librarians use faculty input.

Conclusions of the Findings

- Faculty and librarians indicate highly similar factor preferences upon which to cancel journals; namely two of ten factors, in-library usage and authority, were named important factors by both groups.

With an assessment of the factors seen through both a faculty and librarian lens, this study descriptively documents how commonly these factors are viewed by both the users and collectors of information. Future collaborative decision-making opportunities between librarians and faculty will further determine whether other groups of librarians and faculty agree upon the use of these factors, and to what degree.

These two factors are especially relevant to examine in the process of cancellation. Librarians and faculty clearly wanted to know if purchased journals are being used (in-library usage) and if these materials are of contextual, subjective value (authority) to library users. The decision to cancel journals grounded on these two factors call librarians into an important place in the canceling journals with faculty and assert that an open dialogue between these two groups is needed to

retain and cancel journals. Because these two factors must be evaluated in different ways, librarians must make decisions with strategic, in-library use information and discuss with faculty which journals represent the authoritative research in their area.

- While similarity and agreement existed in the results for two factors, costs held a different ranking from the faculty and librarian perspectives. These differences present a crucial disconnect between librarians and others in higher education that must be resolved for working on journal cancellations as group decision.

Beyond the findings of the similarity between these two groups in this one decision-making process in higher education, this study could present issues and ideas for other decision-making opportunities in the academy. This study identified the librarians' interest in further faculty participation in decision making and their interest in examining new ways of involving faculty. Surveying users, including faculty in an organized annual review of journal titles and educational seminars for

faculty on scholarly communication issues are just a few of the ways librarians suggested to start further involving faculty in library decision making.

Therefore, librarians must work to develop ways to further inform faculty of the annual escalation of journal costs and why these issues must be continually re-examined. Further participation and interest in examining new ways of involving faculty in decision making were identified in this study from the librarians. Due to this divergence in the interest of examining cost as a factor for faculty, librarians offer they would like to explore other ways of involving faculty in an organized annual review of journal titles via educational seminars for faculty on scholarly communication issues.

- Librarians are using information solicited from users, in this case faculty, with strategy.

Even if more active participation is not fully achieved, librarians demonstrate they use the current faculty input they are receiving and seem somewhat receptive to expanding the process of faculty inclusion

even further. The findings of this study portray a type of institution worthy of this inquiry of relationships among decision makers in higher education, especially in light of the similarity of the factors used to assess and make decisions in this setting.

A more detailed discussion of findings presented here is in relationship to the two research questions that are the focus of this study, (1) faculty and librarian assessment of the ranking factors used in journal cancellations and (2) librarian usage of faculty input on the journal cancellation process.

Research Question One

- The preconceived notions of canceling journals only due to cost is not held in agreement by either groups, yet authority of the journal and in-library usage are two highly important factors for both groups.

To examine research question one, whether the factors used by librarians to cancel journals are sufficient enough to inform librarians in the decision-making process, we must look at the demonstrative results

given by both groups. The similarity in what each group designates as relevant to assess includes the faculty's naming (1) In-Library Usage, (2) Citedness, and (3) Authority; and the librarian's naming (1) Authority, (2) In-Library Usage, and (3) Costs.

Important to note is the finding that cost is one of the top three factors for librarians, but one of the lowest factors for faculty. Since costs drive the need for cancellations, librarians must continue to communicate to faculty the depth of the cost problem more fully and forcefully. Annual, journal cancellation reviews could become one of the many ways librarians could work to further educate faculty on the cost aspects of these problems.

Also, in this study, it is also worthwhile to point out other lowest factors of concern for each group, including faculty reporting (1) costs (44%), calculating the mid-range and higher rankings, and librarians naming the physical characteristics (30%), using the same mid-range and higher calculation. With these findings, it can be understood in the context of the terms and instrument ranking procedures where the interest of both groups lie.

In the second assessment of participant's preferences, respondents were allowed to examine factors in their own terms. The comments in this section give rich insight as a verification of how important the factors of in-library usage, authority, citedness, cost, and access elsewhere are to both groups.

- The perceptions of the faculty ranking by librarians was similar to their actual responses.

The similarities between what librarians assumed faculty would name as their top factors are almost a mirror representation of how faculty actually reported and ranked their key issues for decision making. An essential difference in these findings is that librarians examine more closely the issue of indexing and citation ranking, a common valuative factor for the information profession.

- Indexing, impact, or citation rankings are not highly ranked by faculty.

Indexing, as a factor, can be seen as essential to the profession of librarianship and tied to assisting in access to journals. Citation ranking will be discussed separately in this chapter, as it relates to recent literature.

As a summary of the evaluation of research question one, it can be found by this study that faculty and librarians both named their broad factors of concern about journals, specifically where their use of journal is relevant to 1) courses currently taught on campus, 2) journals directly related to research currently being conducted on campus, 3) materials faculty were either referring students to in class, or 4) materials that librarians were assisting students locate, as a result of faculty comments and referrals (found in survey questions relating to research question one).

Overall and with striking similarity, the findings of the survey questions tied to research question one demonstrate measurable similarity in how faculty use and rank factors to consider when canceling journals and how librarians use and rank these factors.

Research Question Two

The discussion of research question two is best placed in context of the research literature previously examining these issues. This study works to confirm and illuminate past research, but also to use the results to inform practitioners in new ways.

- Due to similarity in understanding of the decisions to be made by librarians, faculty should be included despite perceived barriers.

On the issue of decision making, this study confirms what others in the literature have previously reported. In examining librarian perceptions of barriers to faculty involvement in decision making, this study highlights the perceived constraints of non-participation from faculty in journal cancellation decisions (table 20). The two highest percentages, time (42%) and information (36%), were seen by librarians as the reasons faculty would have non- or low-participation with librarians on journal cancellation decisions.

- Faculty participation must be increased in academic library decisions to find a common ground in reaching decisions.

The reported satisfaction with faculty participation levels of involvement in selection and/or cancellation of journals shows that satisfaction (table 18) encompasses over 40% of the responses. This satisfaction with faculty involvement in the process of selection and cancellation could always be enhanced.

Past organizational assessments have focused on participation and decision making failures, such as those defined by the organizational characteristics of a "garbage-can decision-making process," including the high energy used on the decision process, the lengthy time needed to make a decision, and the fluidity or randomness of participation (Cohen, March, & Olsen, 1972).

The literature does not offer this model as a highly productive model for libraries or institutions of higher education (Bell, 1999). In this study, time and information were seen as perceived issues for faculty. If librarians think faculty members are too busy or do not have enough information, such as information on costs, they might not include

faculty in their decision processes. This study works to show the possibilities for the integration of their decision interests based on the similarities in their rankings of the factors supplied.

Librarians report most faculty are somewhat uninformed on the issues of journal costs. Faculty are asked to provide input for a decision on an issue they do not have much information on. Faculty familiarity on the issues of cost is perceived by librarians to be low (table 21), but essential to decision making. Librarians in this study report in their experience that faculty are either somewhat unfamiliar (37%) or very unfamiliar (21%) with actual journal costs. To enhance the decision-making value and input, faculty must be better informed on the issues of costs and the need for cancellations.

- Similarity in ranking these factors could represent an environment that could encourage other group decision-making opportunities.

This study finds librarians and faculty working in a situation in which decision makers are presented with a variety of decision options. Having an infinite variation of decisions, without prescriptions or set

guidelines to follow, a more optimal decision process is provided (Allison, 1971). Especially in this unique setting of academic libraries, where libraries are the conceptual ground floor upon which a research university is built, libraries are responsible to both administration and research user groups (Budd, 1998). Any opportunity for flexibility in the methods to reach decisions may improve strategic decision making. The findings here on the similarity in value of the factors should encourage library practitioners and faculty to continue examining the value of working together.

- Librarians are not arbitrary in how they use information from faculty, especially in the incorporation of comments on canceling journals.

A final finding related to research question two of this study highlights the effective usage of faculty input in journal cancellations decisions. Comments from participants demonstrate that librarians are not arbitrary in their incorporation or usage of faculty comments in given

decisions on cancellation journals. Representative comments from librarians on how they incorporate faculty input in journal cancellation decisions include:

- "abide by faculty wishes as much as the budget permits"
- "... achieve faculty buy-in"
- "solicit comments (and) prioritize them"

It is worthy to note that librarians are taking careful consideration of this information. The comments on faculty involvement, both current and ideal levels, show considerable interest in more fully involving faculty in library decisions (tables 17 and 19). Each of the comments connects to previous research in this area, underscoring the importance of canceling journals as an opportunity to discuss and market these concerns with faculty (Barstow, 1993; Madison, 1999). Even studies in the early stages of the serials crisis point to the need for faculty buy-in and the continual development of faculty-librarian relationships (Stenstrom & McBride, 1979; White, 1980). This study reconfirms this

need. In the context of how much worse the situation of journal costs has become in recent years, it is only more fitting that these partnerships be held in higher regard today.

Recommendations to Librarians

Librarian Usage of Cancellation Factors

- Understand and utilize the possible similarity of faculty and librarians in evaluating journal cancellation factors.

An essential finding of the study is the matched assessment of faculty and librarians in their evaluation of the factors. In the findings of this study, the similarities of the top rankings of both groups show the opportunity for further assistance with these difficult decisions in academic libraries. What librarians working with journal cancellations can learn from these findings is what researchers have theorized and grappled with before.

- Examine closely rankings, such as impact, or citation rankings, since faculty and recent research do not positively rank these factors.

New research in the area of citation value elicits a recommendation for librarians to closely examine how they are using citation values or citation indexing as a factor when considering evaluating a journal for cancellation. Faculty do not highly rank these values as a cancellation factor. Recent research notes caution when relying on citation factors, questioning the possible misuse of this bibliometric application in relationship to how these are rated by clinical practitioners and scientific researchers (Saha, Saint & Christakis, 2003). Previous research has argued that library practitioners must look to a variety of factors rather than focusing on canceling journals because of one factor (Bader & Thompson, 1989), and in this study, cost is not even the highest ranked factor by either faculty or librarian participants. Therefore, this study recommends examining a portfolio of factors, such as those used here.

While cost should not be the primary factor evaluated, a journal's "impact factor," which measures the frequency with which an article was cited by others (Garfield, 1972), would not be the seemingly automatic application of relevancy or gauge of relevancy for selecting journals for purchase, cancellation, research, or even article submission for faculty that it may be being used as (Hecht, Hecht & Sandberg, 1998).

- Realize that other factors exist and that a series of factors must be examined before canceling journals.

Cost, shelf-use, faculty need and connection with curriculum were all additional essential factors named in this study as relevant to librarians and faculty. Impact factors are only bibliometric indicators that demonstrate the half-life citation value of a journal or article (Garfield and Sher, 1963). In the digital library environments, online usage will skew online articles with a higher measurement, implying something the measurement was never intended to accomplish: measure scientific quality (Frank, 2003). By design, the factor was not intended to be used as a cancellation indicator. This study should further call into

question their usage and recommend that other factors be evaluated by faculty and librarians.

Recommendations to Future Researchers

Faculty Involvement in Library Decision Making

- Allow for institutional growth and advancement by involving faculty throughout the canceling process because of their need for academic research collections.

In concluding this study, it is worthwhile to look at the theoretical undercurrents of this research, the ties to organizational decision making. As an example of organizational learning, the decision-making opportunities found in academic libraries present themselves as an example of worker-created *intelligence*, which A. P. Carnevale (1991) offers as approximately 60 percent of today's competitive advantages in organizations. If such examples of best practices are being developed in academic libraries, and more broadly in higher education, these lessons learned should be more closely examined in the future. D. G. Carnevale (2003) presents that this inwardly focused learning of our organizations

is found in organizations in which 1) real problems are present; 2) people examine the issues; 3) people learn from an existing problem; and 4) individuals report back to the group with problem-solving strategies. This study attempts to illuminate all four of these elements found in academic libraries that are confronted with the journal problem, and presents a model for dealing with other current or future problems occurring in the academy.

- Assume organizations can learn from self-examination and work for solutions to problems within the organization.

Robson (1993) and Argyris (1993) examine the practical approaches to learning within organizations and the role that action research can play in allowing solutions to real problems to be found. In the seemingly simplistic model of action research: action (new behavior), data gathering, discussion/feedback, (more) action, and the repetition of cycles until problems are resolved, Burke (1994) presents the model that is commonly used to explain how librarians approach the journal cancellation process effectively with the use of faculty. While D. G.

Carnevale (2003) points out that action research is applied research, bound by the organizations in which it is found, the search for solutions is a true opportunity to look within to resolve difficult problems in higher education today.

Faculty Input in Academic Library Decision Making

- More directly provide for opportunities for faculty to become more fully involved in the academic library and the internal decision-making process.

Recommendations from librarian participants in this study offer a rich dialogue that could be opened on the topic of journal costs and cancellations in higher education. Recommendations for suggestions of how librarians could strategically include faculty in the future are:

- Create an annual review of journal titles by title, including cost of the journal and disseminate the information to departmental groups on campus

- Show faculty members the entire list of journal subscriptions, both of their department and the overall campus, so they can see the various range in expenditures
- Introduce faculty members to electronic alternatives in publishing opportunities on the Internet, which will further become an issue for tenure and promotion in higher education
- Communicate with faculty members through multiple venues, such as meetings, group discussions, seminars, library newsletters, and web pages that librarians are working to maintain productive journal collections for faculty members, and are not acting randomly when canceling titles in the library.

In examining the use of information for decision making, Browne (1993) points out how decisions makers, such as the librarians and faculty in this study, may have ample opportunity for the best of intentions, yet in practice, when making final decisions, present and use different information from what is expected. These differences may include the following:

- Decision makers might not use the information collected as a basis for choosing the alternative that is implemented, although they may have intended to.
- Decision makers use information for general enlightenment and to gain a background understanding of the context in which the decision is being made.
- Decision makers are aware of the potential for using information politically to establish a case for additional resources.
- Decision makers use information as a symbol of rationality and, by extension, as an indicator of quality in decision making.

In terms of policy implementation for the decisions related to canceling journals, several of these hold true for how librarians may proceed in practice, rather than in theory. Several of the open-ended responses from librarians in this study found the gathering of faculty comments as essentially worthwhile, but the final decision in collections and journal cancellations were essentially seen as librarian decisions. As librarians continue to search for faculty input in decision making, they

must also strive to indicate how much this information is needed and used.

Communication and Information in Higher Education

- Encourage researchers and librarians to further explore the implications for theory and practice of this study.

As the questions posed to librarians were to gain data on how often and how useful faculty/librarian communication was in the process of canceling journals, the issue of communication and decision making of multiple groups in higher education must be further examined. The similarity in ranking the decision factors as an example of decision making in higher education was a worthwhile pursuit; one worthy of having the findings communicated. The opportunities for collaboration in decision making and the ability to create best practices in higher education seem worthy of the endeavor.

In examining higher education's ability to communicate knowledge and information within an organization, it is found that communication may be good within some groups, while assumed

powerlessness or "blame cultures" may exist in other units in the university (Dhillon, 2001). As in this current study, information provided to groups to assist in decision making is suggested as a means to confront the differences in groups within a campus. Foster (1998) offers specific ways to provide information, and also notes the preferred use of all types of media in which to communicate information:

- Face to face (verbal communication)
- Print-based material
- Electronic forms (Intranet and E-mail)

The examples of faculty and librarians working together matches well with the open-ended comments from the librarians in this study, who are looking for avenues of better communication and ways to provide relevant information to faculty on the serials crisis.

Electronic Journals

- Consider the constant change of scholarly communication and the rise of electronic communication, as new models of publishing.

As librarians examine other opportunities for access to academic journals, a growing viability is the option of searchable databases from commercial document delivery services, increased and different applications to interlibrary loan, and full-text online databases (Everett, 1993; Gessesse, 1994; Hughes, 1997). While not yet seen as a perfect solution to the reductions of journal collections, Besemer (1993) offers suggestions for the implementation of electronic journals that can be seen as a prescriptive model for success in some libraries. In their evaluation, librarians should:

- Evaluate the political model of their institution. Is the library seen as an arm of administration or is it seen as more directly tied to academic departments and the curriculum?
- Gather support of the university administration for new cost-saving initiatives to provide research content.
- Provide online journal-use workshops to develop the technical ability for usage.
- Assess usage levels and costs of these new journal services.

As the finances of the journal market continue to be of prime concern to administrators, front-line managers and library users, the situation of journal cancellations may remain constant for quite some time. However, this study presents the interesting finding of a similarity of thought between librarians and faculty and how they approach the factors chosen upon which to make such difficult research. It is assumed at the conclusion of this study that such decisions will become increasingly more difficult to approach. It is hoped the study assists in informing librarians how to proceed.

However, one factor that may prove to change or shift the interrelated issues discussed here is that of electronic journals. Could electronic journals, with their desktop and cover-to-cover access, shift this entire situation? Librarians point out that technical capabilities are better than ever and present new options to dealing with the problems of providing scholarly communication at predictable cost (Albanese, 2001). A closer examination is worthwhile. Whether or not these publication channels become solutions or just other options for materials to use and purchase remains to be seen.

At present, the scholarly journal market looks like a bleak and grim reality that few would wish to involve themselves in; yet, scholarly communication is constantly shifting and reshaping itself into new models of providing information to the world's scholars. Several opportunities for other channels of publishing and research exist, as presented in appendix E. The mix of scholarly communication opportunities today presents a new reality for scholars, similar to the way scholarly societies first started networking and publishing with the first science journal, *Royal Society,* founded in London in 1660 and chartered in 1662 (Birch, 1968). But as librarians struggle to find solutions to budget shortfalls and journal cost increases, these materials present current realities of providing research-level materials to users.

Suggestions on Research Procedures

As a note on the research procedures and recommendations for additional research, future researchers need not alter the Schoch and Abels (1994) instrument as used in this study. As discussed in chapter four, the participants were offered the opportunity to select an additional

comment during the ranking of the factors, noted as *other* in Survey Question I in both surveys. Even though the factor was used, the researcher could in no way examine why the participants would have selected this *other* factor, beyond the suggested examples of:

- whether this material is available in other formats in other libraries you have access to;
- what is your reliance on this library as your primary library resource; and
- importance or seminal nature of a given journal to your current research projects.

Since respondents using this factor did not clarify what their response should be associated with, it was not seen as a notable examination or as an additional factor. However, naming an additional factor, such as these above examples or capturing the issue of electronic journals in the marketplace would be a worthwhile pursuit, as this study makes no attempt to consider the decision-making element of canceling a print journal for an online journal. Appendix E points out the new opportunities for publishing research, and the new options for journals in the future, which may alter the basic problems presented here.

Final Comments

A review of past studies examining the procedural aspects of canceling journals identifies a gap in the agreement between librarians and faculty in specific factors used for canceling journals. This research study examined the factors found to be most commonly used as factors upon which to evaluate journals for cancellation.

Using a previously developed factor-ranking instrument, this study surveyed faculty and librarian groups to identify whether factors used in journal cancellations are, from the perspective of faculty and librarians, of equal importance in informing librarians for their decision-making process for canceling journals. The study also examined whether faculty input gathered in the decision-making process is used by librarians in their decision making for journal cancellations.

The study expanded previous research in this area by including two libraries and two library user groups (faculty). The study included qualitative questions answered by librarians regarding the process of journal cancellation, offering an opportunity for librarian participants to examine their own process of journal cancellation in their given library settings. The study descriptively describes how faculty and librarians

both view the factors of similar importance. In addition to the ranking of factors and the general self-assessment of the process for librarians, data presented on how faculty involvement may be either further expanded for future journal-cancellation projects or in other decision-making processes. This exploration into the relationships of how these cancellation factors are viewed by both groups is an examination that is worthy of further study.

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APPENDICES

Appendix A: Cover Letter Sent to Participants

Dear Faculty and Librarians,

Following is a study being conducted as part of my dissertation research in the area of academic libraries. I am a doctoral student in the Educational Leadership program at The George Washington University.

I invite you to participate in this study of academic journal cancellations in academic libraries. You will be asked to rank elements that are commonly considered in canceling journals on campuses across all types of libraries from 1 to 10. Librarians will also be asked questions on topics regarding other library issues related to decision making for journals. To complete this survey, please read the directions for each section of the survey and make a response based upon your knowledge, experience, viewpoint, or opinion.

The survey can be found here: www.REMOVED.edu where you will select either the Librarian or Faculty survey. You will be asked to read an Informed Consent Form in a PDF format previous to completing the short survey. Please complete the survey.

Thank you very much for you assistance in this research. Should you have any problems accessing the document or web-survey I can be contacted at: 202-xxx-xxxx.

Sincerely,
James Walther

Appendix B: Informed Consent Included in Letter to Participants

Informed Consent Form

I. INTRODUCTION

This study is being conducted to collect data as part of my dissertation research in the area of academic libraries. I am a doctoral candidate in the Educational Leadership program at The George Washington University in Washington, DC. If you agree to participate in this research, you will be asked to complete the following web-based survey questionnaire.

At no time will you be asked any self-identifying information, such as your name. To complete this survey, please read the directions for each section of the survey and make a response based upon your knowledge, experience, viewpoint, or opinion.

It is requested that you answer each question to the best of your ability. To ensure your confidentiality and privacy, the knowledge of your individual name is not collected and the name of your department or university level involvement will not be used by name in any publication or disseminated in any other way.

II. PURPOSE

As a student in the Department of Educational Leadership (GSEHD) of The George Washington University, I am carrying out a research study to gather faculty's and librarian's analysis of the factors used to cancel journals in academic libraries; and gain data on librarians' use of collected data to inform their decisions in canceling journals.
The researcher is James Walther.

III. PROCEDURES

This research will be conducted via the Internet in a web-based survey. The entire survey should take 15 minutes to complete. After reading this **informed consent form**, you should link into your designated web-

based survey (either faculty or librarian). You will be asked to rank a series of factors used to cancel journals in libraries, as well answer open-ended, short-answer questions. The librarian survey includes additional questions that the faculty survey does not include related to cancellation factors.

IV. POSSIBLE RISKS

The things you will be doing have no more risk of harm than you would experience in everyday life.

V. POSSIBLE BENEFITS

You will not receive any personal benefit from taking part in this study.

VI. COSTS

There are no costs to you for taking part in this study.

VII. COMPENSATION

You will not receive compensation for participating in this study.

VIII. RIGHT TO WITHDRAW FROM THE STUDY

Your participation in this research study is voluntary. You may decide not to begin or to stop this study at any time.

IV. PRIVACY OF RESEARCH RECORDS

Your records will be private. No one will know except for the research team that you are a part of this study. The federal government and individuals acting on behalf of the university may review your information. If that happens, we will give them copies of your records that are only related to the study. These copies will not have any information that can link you to the study. Except for these groups, your records will be kept private unless you permit their release or if the records are asked for by court order. Your records will be used for research purposes only. At the end of the study, the records will be destroyed.

X. QUESTIONS

If you have questions about this study, please call the researcher, James Walther, 202-xxx-xxxx during the workday.

XI. SIGNATURES

By reading this consent form, you agree that you understand this is informed consent and understand what is involved in the study in which you will partake. You do not give up any of your legal rights by reading this informed consent form or in participating in the following survey.

XII. RESEARCHER STATEMENT

I certify that the research study has been explained to participants by me or my research staff including the purpose, the procedures, the possible risks, and the potential benefits associated with participation in this research study. Any questions raised have been answered to the individual's satisfaction.

_____

James Walther, Investigator
August 2002

Appendix C: Faculty Survey

Please complete the following survey. You will be asked to rank factors which are commonly considered in the decision of canceling journals in academic libraries. Thank you for your participation in this survey.

Department: ☐Anatomy ☐Biochemistry
☐Biological Sciences ☐Chemistry ☐Mathematics
☐Microbiology ☐Pharmacology ☐Physics

No. of Years Teaching : ☐1-4 ☐5-8 ☐9+

No. of Years Researching: ☐1-4 ☐5-8 ☐9+

Estimated Research Hours per week: ☐1-5 ☐6-10 ☐11+

Highest Degree Earned: ☐Doctorate ☐M.D.

I. Rank these factors from 1 (LEAST IMPORTANT) to 9 (MOST IMPORTANT), or to 10 (where appropriate) when considering making a recommendation regarding the cancellation of journals.[1/]

1/ Survey adapted with permission from Schoch, N. & Abels, E. G. (1994). Using a valuative instrument for decision making in the cancellation of science journals in a university setting. *Proceedings of the American Society of Information Science (ASIS), 31*, 41-50.

	Factors	Rank Number	Comments
A	Costs (*i.e.*) cost per subscription (annual rate), cost per issue, cost per page, cost per article		
B	Citedness (*i.e.*) impact factor (have others cited the journal?), total cites by other authors, cites by this department or institution in their publications		
C	Authority (*i.e.*) publisher, editorial board membership, peer review, reputation in the field		
D	Currency (*i.e.*), speed of publication		
E	Language		
F	Physical characteristics (*i.e.*), graphics (number and quality), legibility (typeset or camera ready), available electronically		
G	Indexing, including in major index/abstract tools		
H	In-library use (*i.e.*), critical campus resource required for teaching and research		
I	Availability elsewhere (*i.e.*), other libraries on campus, at other local libraries, nationally through interlibrary loan		
J	Other (please specify) (Include other factors, such as whether this material is available in other formats in other libraries you have access to; what is your reliance on this library as your		

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	Factors	Rank Number	Comments
	primary library resource; importance or seminal nature of a given journal to your current research projects, etc.).		

II. What do you think are the three most important factors your library should consider in canceling journals?

1) _____ 2) _____ 3) _____

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Appendix D: Librarian Survey

Please complete the following survey. You will be asked to rank factors which are commonly considered in the decision of canceling journals in academic libraries. In addition, you will be asked questions on your views of the involvement of yourself and faculty on these issues in your library. Thank you for your participation in this survey.

Highest Degree Earned: ☐MA/MLS ☐Doctorate

Library: ☐General, including science ☐Medical

What is your current job title:_____

Do you work for the university full-time or part-time? ☐FT ☐PT

I. Rank these factors from 1 (LEAST IMPORTANT) to 9 (MOST IMPORTANT), or to 10 (where appropriate) when considering making a recommendation regarding the cancellation of journals.[1/]

1/ Survey adapted with permission from Schoch, N. & Abels, E. G. (1994). Using a valuative instrument for decision making in the cancellation of science journals in a university setting. *Proceedings of the American Society of Information Science (ASIS), 31*, 41-50.

	Factors	Rank Number	Comments
A	Costs (*i.e.*), cost per subscription (annual rate), cost per issue, cost per page, cost per article		
B	Citedness (*i.e.*), impact factor (have others cited the journal?), total cites by other authors, cites by this department or institution in their publications		
C	Authority (*i.e.*), publisher, editorial board membership, peer review, reputation in the field		
D	Currency (*i.e.*), speed of publication		
E	Language		
F	Physical characteristics (*i.e.*), graphics (number and quality), legibility (typeset or camera ready), available electronically		
G	Indexing, including in major index/abstract tools		
H	In-library use (*i.e.*), critical campus resource required for teaching and research		
I	Availability elsewhere (*i.e.*), other libraries on campus, at other local libraries, nationally through interlibrary loan		

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	Factors	Rank Number	Comments
J	Other (please specify) (Include other factors, such as whether this material is available in other formats in other libraries you have access to; what is your reliance on this library as your primary library resource; importance or seminal nature of a given journal to your current research projects, etc.).		

II. What do you think are the three most important factors your library should consider in canceling journals?

1) _____ 2) _____ 3)

_____

III. What do you think *your faculty* consider as the three most important factors your library should consider in canceling journals?

1) _____ 2) _____ 3)

_____

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Evaluation of the Use of Faculty Decision Making Input for Journals.

1. How would you rate your involvement in selection and cancellation of journal titles?

Selection

☐Primary Responsibility ☐Fully Involved ☐Somewhat Involved

☐Rarely Involved ☐Not Involved

Cancellation

☐Primary Responsibility ☐Fully Involved ☐Somewhat Involved

☐Rarely Involved ☐Not Involved

2. How often do you discuss journal selection and cancellation concerns with faculty members:

Selection of Journals

☐Every Day ☐1-2 times a week

☐Several times a month

☐Once a month ☐Several times a year ☐Once a year

☐Only when mandated by a selection project or initiative

☐Never

Cancellation of Journals

3. In your library, how do you incorporate the use of faculty in assisting with establishing the journal collection in your library?

4. How satisfied are you with the level of participation of the faculty in assisting in establishing the journal collection in your library?

For Selection

☐Very satisfied ☐Somewhat satisfied

☐Somewhat dissatisfied ☐Very dissatisfied

☐No opinion ☐Do not know

For Cancellation

☐Very satisfied ☐Somewhat satisfied

☐Somewhat dissatisfied ☐Very dissatisfied

☐No opinion ☐Do not know

Comments on Selection or Cancellation concerns:

5. Do you see any of the following as barriers for more participation from the faculty for journal cancellation projects in your library (East, 1997)?[2/]

Check all you feel apply as barriers for faculty:

☐	Time (Temporal proximity), *i.e., Do you believe faculty consider themselves too busy to be involved?*
☐	Text (Information), *i.e., Do you believe faculty do not have information on the depth of journal costs?*
☐	Context (Environment), *i.e., Do you believe faculty consider they should not be involved in library decisions?*
☐	Constituents (Stakeholders), *i.e., Do you believe faculty consider others on campus should be lobbying for a larger library budget to alleviate financial problems associated with journal costs?*

6. In your library, how familiar would you say faculty are with the trends in scholarly communication pricing, better know as the serials crisis throughout higher education and publishing?

☐Very Familiar ☐Somewhat Familiar

☐Somewhat Unfamiliar ☐Very Unfamiliar

7. Please describe below any other ways you would involve faculty in your decision making for cancellations if you could easily obtain participation?

2/ East, W. B. C. (1997). Decision-making strategies in educational organizations. *The Journal of Physical Education, Recreation and Dance, 68*(4), 39-45.

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Appendix E: Examples of New Forms of Scholarly Communication

The following list is intended to be a resource to future researchers, documenting the growing number of projects to change scholarly communication at the turn of the century. Each of these projects attempts to shift the market problems of academic journals and the constant rise in price. This list is reproduced with permission from: Albanese, A. R. (2001). Revolution or evolution. *Library Journal, 126*(18), 48-51. As the conclusion of this research study points out, journal cancellations may winnow as there is a shift to purchasing new materials or former print-only journals in electronic forms.

ACLS History Project

The American Council of Learned Societies History E-Book Program, funded with a $3 million grant from the Andrew W. Mellon Foundation in June 2000, is pioneering the use of e-books in the field of history. The American Council of Learned Societies is planning to launch the program's first "500 or so" history e-books this year. Mostly conversions of previously published titles, the initial batch will include both public domain classics and recent influential works. Libraries will serve a prominent role in the success of this venture, as access initially will be by institutional subscription. http://www.historyebook.org

ArXiv

Developed by scientist and scholarly communication innovator Paul Ginsparg at the Los Alamos National Laboratory, NM, ArXiv recently moved with Ginsparg to his new post at Cornell University, Ithaca, NY, and now will be part of Cornell University Library's special collections. Considered the world's first preprint archive, it houses a wealth of scientific information, all available freely over the web. According to experts, preprint servers like ArXiv represent the strongest possibility for change in scientific scholarly communication—direct communication among scientists facilitated by the Internet. http://arxiv.org

Berkeley Electronic Press

Founded in 1999 by University of California–Berkeley professors Robert Cooter, Aaron Edlin, Benjamin Hermalin, and technologist David Sharnoff, the Berkeley Electronic Press is a for-profit venture that plans to exploit the Internet to make scholarly publishing more efficient. The press launched its first "fully peer-reviewed, high quality e-journals" in spring 2001 and has also developed for sale a suite of digital tools designed to place "the power to publish in the hands of the researcher." Bepress has been endorsed by SPARC and has recently partnered with the California Digital Library. http://www.bepress.com

BioMed Central

The brainchild of Vitek Tracz, chair of the Current Science Group, BioMed Central is an independent, nonprofit publishing house committed to providing immediate, free access to peer-reviewed biomedical articles. BioMed Central currently publishes more than 50 online journals covering the whole of biology and medicine. Publishing costs are paid by alternative methods, such as author fees and grants, rather than institutional subscription revenue.
http://www.biomedcentral.com

BioOne

Created to fulfill the needs of both scientific societies and libraries, BioOne includes the full texts of roughly 40 peer-reviewed journals and bulletins published by American Institute of Biological Sciences (AIBS) member societies and other organizations. Officially launched in June 2001, BioOne offers about 40,000 full-text pages, available in both HTML and PDF formats. BioOne is distinguished from other aggregations by its highly focused content from related sources. This collaboration of organizations—AIBS, SPARC, University of Kansas, Big 12 Plus Libraries Consortium, and Allen Press—promises "library-friendly prices." http://www.bioone.org

Gutenberg-e History Project

Founded in 1999 by Princeton University historian Robert Darnton, this awards/publication program is administered by the American Historical Association (AHA) with funding from the Andrew W. Mellon Foundation and technical expertise from the digital pioneers at Columbia University Press and Columbia University Libraries. The Gutenberg-e program is trying to increase acceptance of the e-book format for academic monographs by combining the prestige of an AHA award for best dissertation within a subfield with exclusive distribution via e-book. Library participation will be crucial, as access to the e-books will be available through institutional site licenses. The first six e-books are scheduled to be published within the year.
http://www.theaha.org/prizes/gutenberg/Index.cfrm

HighWire Press

An initiative of Stanford University Libraries, HighWire Press was started in 1995 to ensure that scientists and "responsible" publishers would lead the transition toward use of new technologies for scientific communication. HighWire is not a publisher but manages subscriber access to the journals it puts online for its publishing partners. Its success has been extraordinary. Under the library's purview, HighWire Press today hosts 293 sites, offers nearly 325,000 free full-text journal articles, and is considered the cutting edge for electronic publishing.
http://highwire.stanford.edu

JSTOR

Established as an independent not-for-profit organization in August 1995, JSTOR is a digital archive of more than 100 core scholarly journals, covering 15 subjects, primarily in the humanities and social sciences. JSTOR is available on a site-license basis, with end users able to search, browse, print, and save any article from the collection. The project was originally conceived (and funded) by William G. Bowen, president of the Mellon Foundation, as an effort to ease space problems by converting back issues of paper journals into electronic formats.
http://www.jstor.org

Project MUSE

Launched in 1995 by Johns Hopkins University Press, in collaboration with the Milton S. Eisenhower Library at Johns Hopkins University, Project MUSE has been hailed for its library-friendly pricing, licensing, and usage policies. Project MUSE offers the full text of JHUP scholarly journals on the web, roughly 50 titles in the humanities, social sciences, and mathematics, with journals available through institutional subscriptions either as a package or individually. http://muse.jhu.edu/journals

PubMed Central

Conceived by former National Institutes of Health Director Harold Varmus, PubMed Central is a digital archive of life sciences journal literature managed by the National Center for Biotechnology Information (NCBI) at the U.S. National Library of Medicine (NLM). PubMed Central offers free, unrestricted access to member journal articles and is the backbone of the PLoS initiative in which nearly 27,000 scientists internationally have pledged not to publish with journals that do not make their materials available to PubMed Central within six months of publication. http://www.pubmedcentral.nih.gov

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